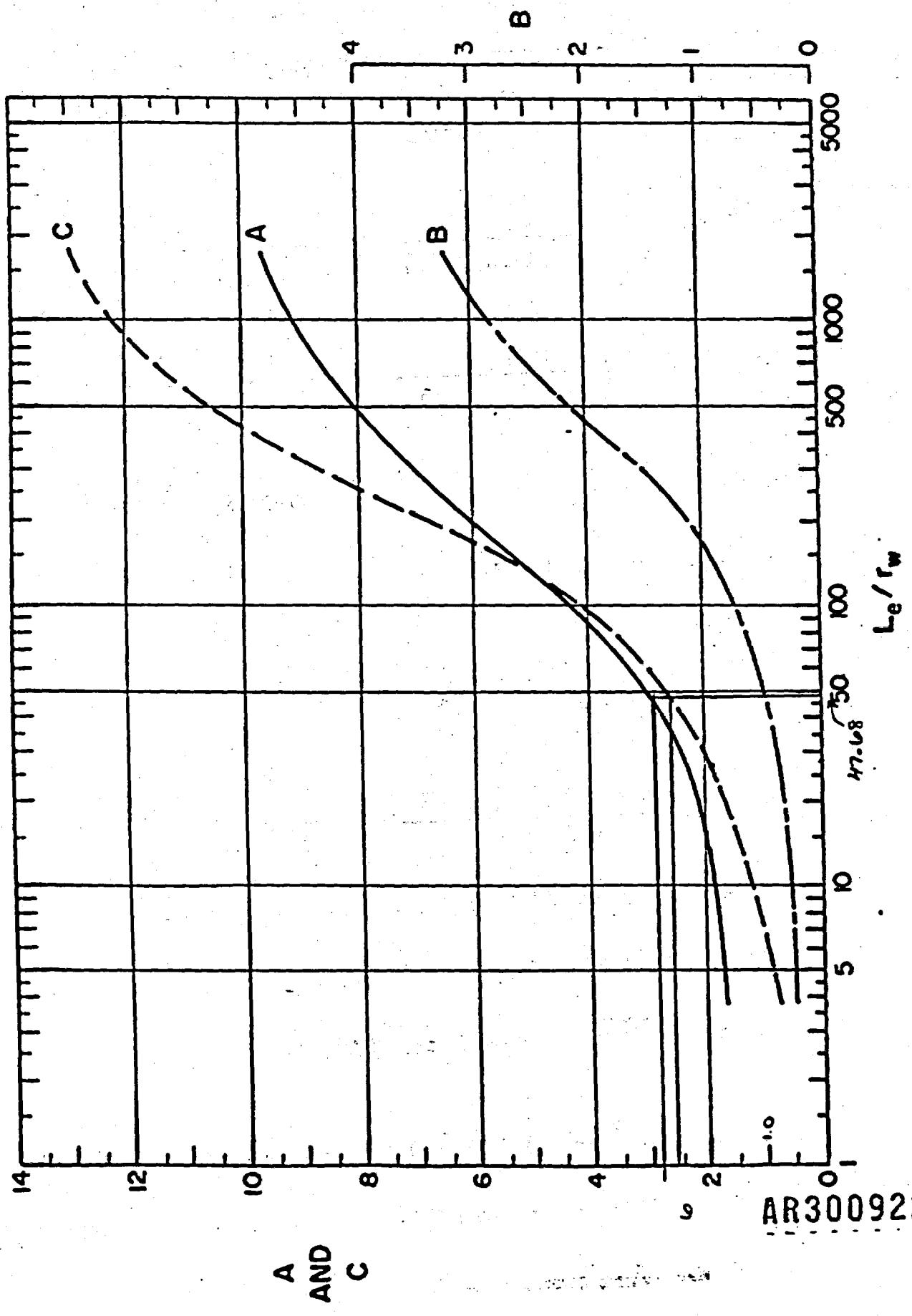


515
110927



A
AND
C

NUS CORPORATION AND SUBSIDIARIES

STANDARD CALCULATION
SHEET

CLIENT: EPA - Gray for TCE	FILE NO.: 6214	BY: SKB KTM 3/30/88	PAGE 1 OF 1
SUBJECT: Slug Test Calc's : Bowwer + Rice		CHECKED BY: SKB 4/4/88	DATE:

LF 13-43

 $H = L_w$

$$\ln \frac{R_e/r_w}{L_e/r_w} = \left(\frac{1.1}{\ln(L_w/r_w)} + \frac{C}{L_e/r_w} \right)^{-1}$$

$$\ln \frac{R_e/r_w}{L_e/r_w} = \left(\frac{1.1}{\ln(36.71/0.323)} + \frac{2.2}{34.06} \right)^{-1}$$

$$\ln \frac{R_e/r_w}{L_e/r_w} = (0.232 + 0.065)^{-1}$$

$$\ln \frac{R_e/r_w}{L_e/r_w} = 3.367$$

$$K = \frac{r_c^2 \ln \frac{R_e/r_w}{L_e/r_w}}{2 L_e} \cdot \frac{1}{t} \cdot \ln \frac{H_0/Y_0}{Y_1}$$

$$K = \frac{(0.167)^2 (3.367)}{2(11.0)} \cdot \frac{1}{0.3} \cdot \ln \left(\frac{1.95}{0.52} \right)$$

$$K = (0.0043) (3.33) (1.32)$$

$$K = 0.0189 \text{ ft/min } 1.89 \times 10^{-2}$$

$$K = 0.0096 \text{ cm/sec } 9.60 \times 10^{-3}$$

$$T = K(\text{ft/min}) \cdot H(\text{ft}) \cdot 1440 \text{ min/day} \cdot 7.48 \text{ gal/ft}^3$$

$$T = K \cdot H \cdot 10771.2$$

AR300923

$$T = 7473 \text{ gpd/ft}$$

CLIENT	EPA	FILE NO.	621Y	BY	KTM	3/30/88	PAGE 2 OF 4
SUBJECT	CROYDON TCE			CHECKED BY			DATE

CALCULATIONS: (BOUWER & RICE)

LF 13-43

DEPTH (FT.)WELL CONSTRUCTION

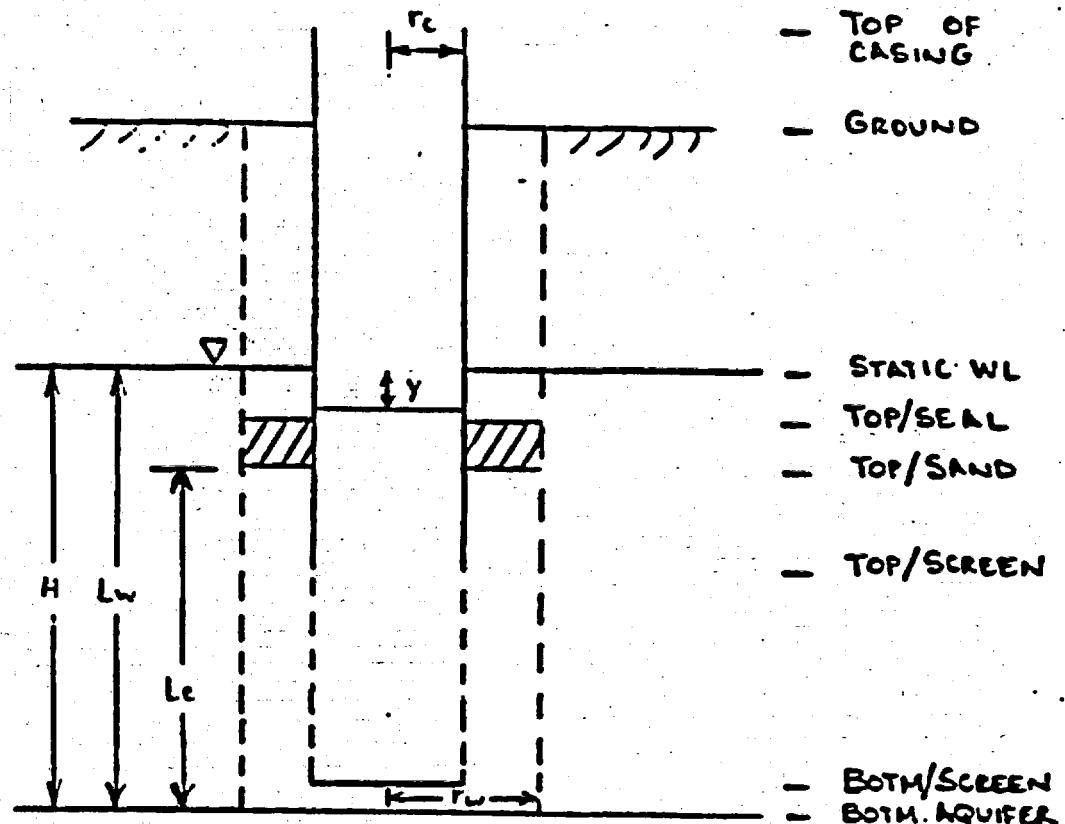
+1.74-

0 -

6.29 -

32.0 -

33.0 -

43.0 -
43.0 -

$$H = 43.0 - 6.29 = 36.71$$

$$Lw = " " = 36.71$$

$$Le = 43.0 - 32.0 = 11.0$$

$$rc = 0.167$$

$$rw = 0.323$$

$$Lc/rw = 11.0 / 0.323 = 34.06$$

$$A =$$

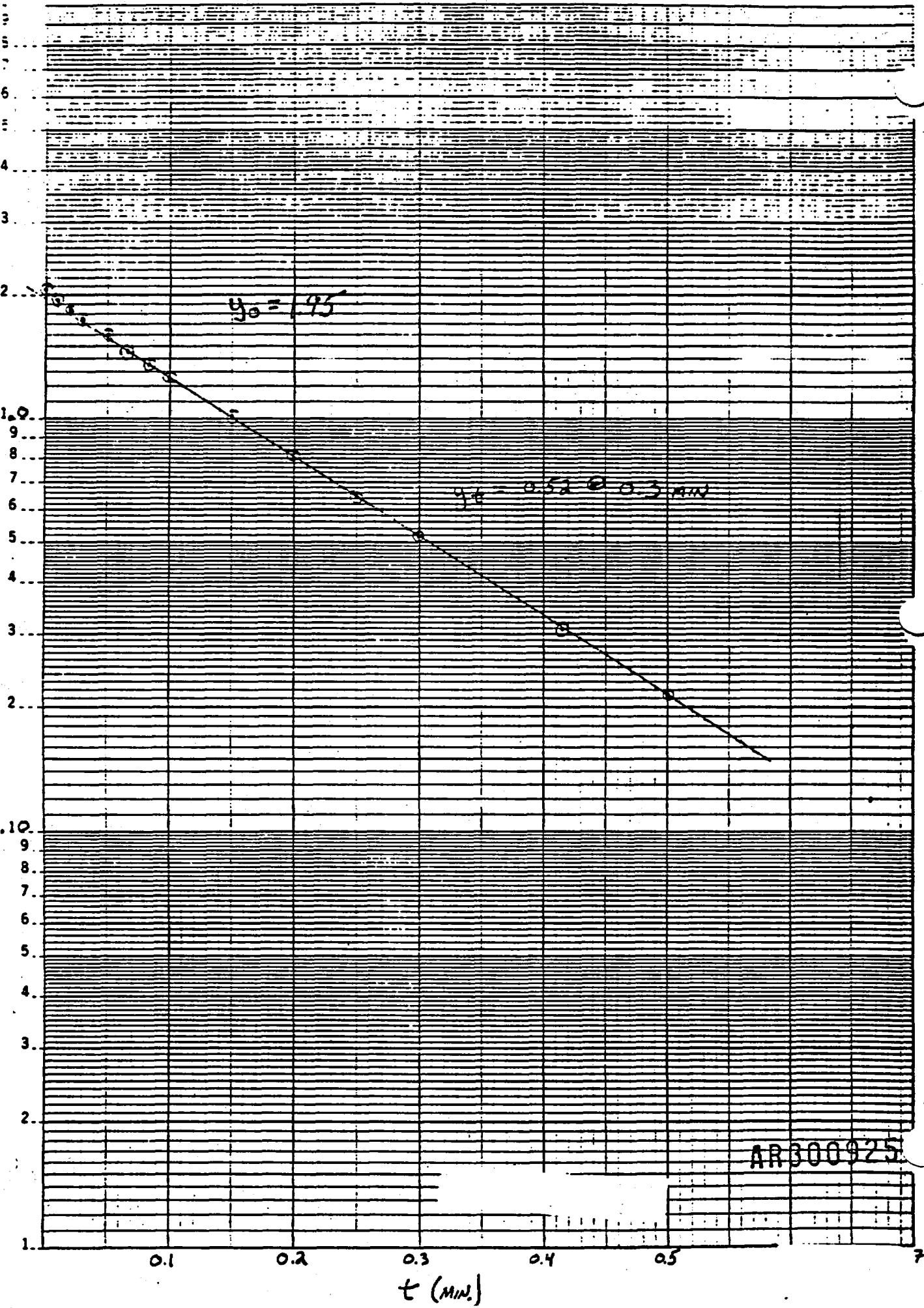
$$B =$$

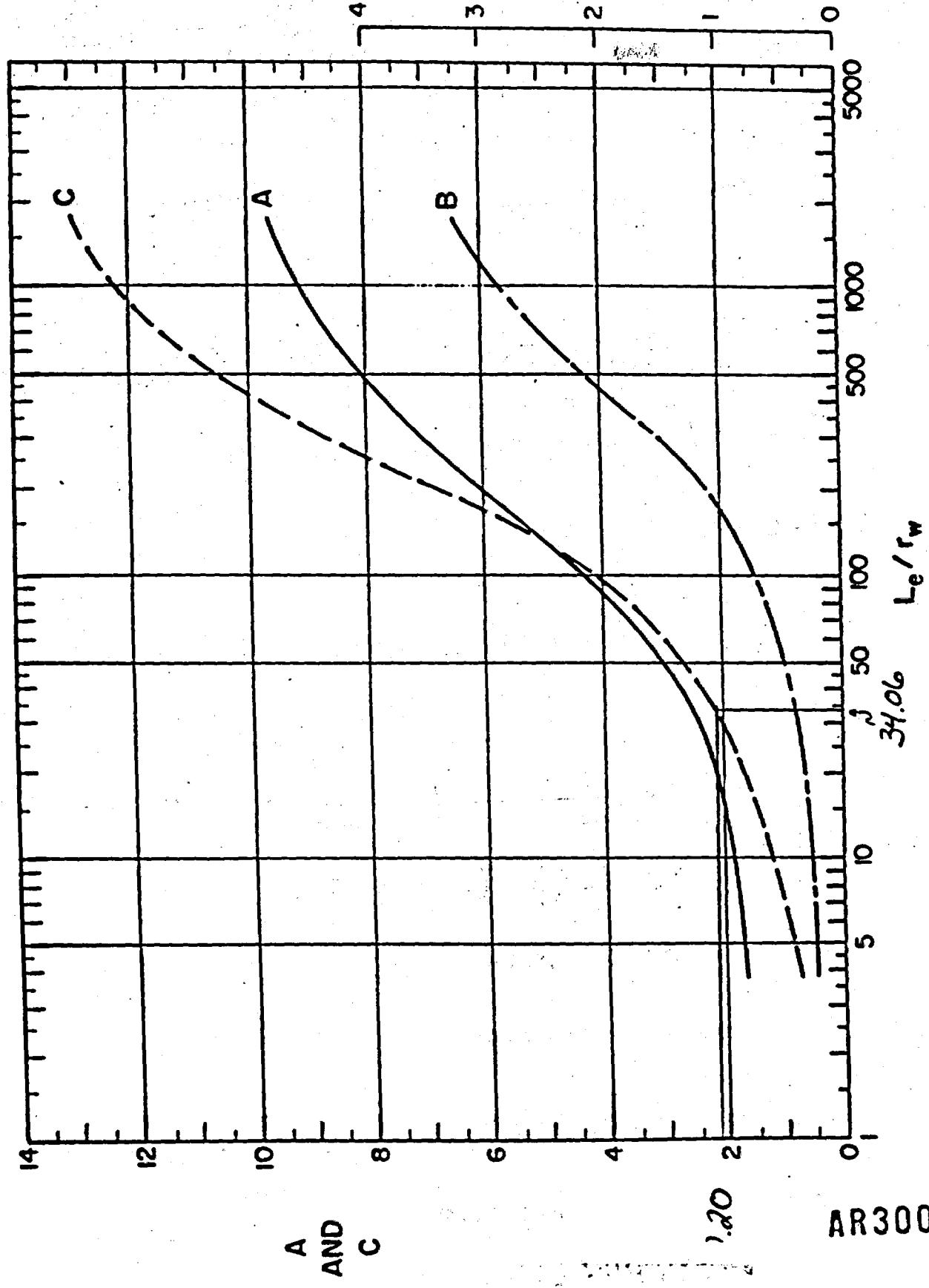
$$C = 2.20$$

AR300924

LF 13-43

K-E SEMILOGARITHMIC • 3 CYCLES X 10 DIVISIONS
KELFEL & ESSER CO. NEW YORK





1.20 AR300926

NUS CORPORATION AND SUBSIDIARIES

STANDARD CALCULATION
SHEET

CLIENT: EPA	FILE NO.: 6214	BY: SKB	PAGE 1 OF -
SUBJECT: Site Test Calculations - Power + Rice		CHECKED BY: KTM 5-10-88	DATE: 5/10/88

LF-14-20

 $H \gg L_w$

$$\ln R_e/r_w = \left(\frac{1.1}{\ln(L_w/r_w)} + \frac{F + B \ln((H-L_w)/r_w)}{L_e/r_w} \right)^{-1}$$

$$\ln R_e/r_w = \left(\frac{1.1}{\ln(14.07/0.5)} + \frac{2.2 + 0.35 \ln((57-14)/0.5)}{10.0/0.5} \right)$$

$$\ln R_e/r_w = \left(0.3296 + 0.1880 \right)^{-1}$$

$$\ln R_e/r_w = 1.93$$

$$K = \frac{r_e^2 \ln R_e/r_w}{2 L_e} \cdot \frac{1}{t} \cdot \ln \frac{y_0/y_t}{y_t}$$

$$K = \frac{(0.167)^2 (1.93)}{2(10.0)} \cdot \frac{1}{0.10} \cdot \ln(2.0/0.88)$$

$$K = (0.0027) (10.0) (0.8210)$$

$$K = 2.22 \times 10^{-2} \text{ ft/min}$$

$$K = 1.13 \times 10^{-2} \text{ cm/sec}$$

$$T = K(\text{ft}/\text{min}) \cdot H(\text{ft}) \cdot 1440 \text{ min/day} \cdot 7.48 \text{ gal/ft}^3$$

$$T = K \cdot H \cdot 10771.2$$

AR300927

$$T = 13,647 \text{ gpd/ft}$$

CLIENT. SUBJECT : VENUE	FILE NO.: C214	BY. CHECKED BY	PAGE 2 OF 4
			DATE 5/13/87

CALCULATIONS: (BOUWER & RICE)

LF-14-23

DEPTH (FT.)

2.1

0.0

5.93

7.5

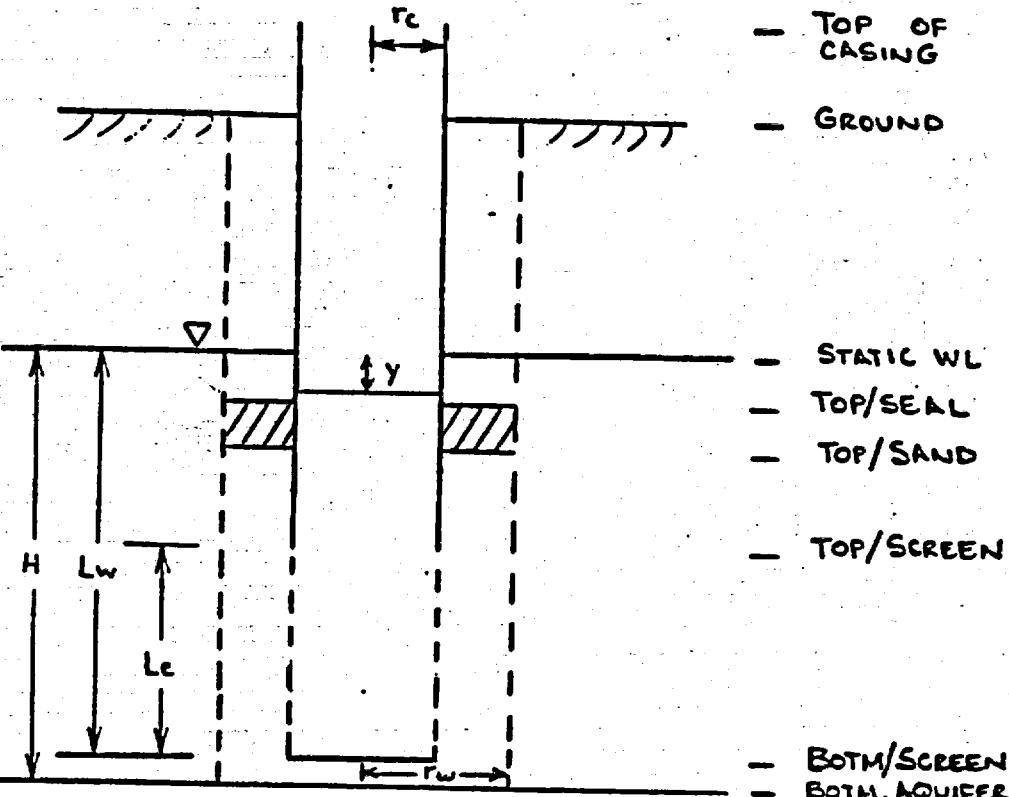
10.0

50.0

63.0

WELLCONSTRUCTION r_c y r_w

- TOP OF CASING
- GROUND
- STATIC WL
- TOP/SEAL
- TOP/SAND
- TOP/SCREEN
- BOTM/SCREEN
- BOTM. AQUIFER



$$H = 63.0 - 5.93 = 57.07$$

$$L_w = 20.0 - 5.93 = 14.07$$

$$L_c = 20.0 - 10.0 = 10.0$$

$$r_c = 0.167'$$

$$r_w = 0.5'$$

$$L_c/r_w = 10.0 / 0.5 = 20.0$$

$$A = 2.2$$

$$B = 0.35$$

$$C =$$

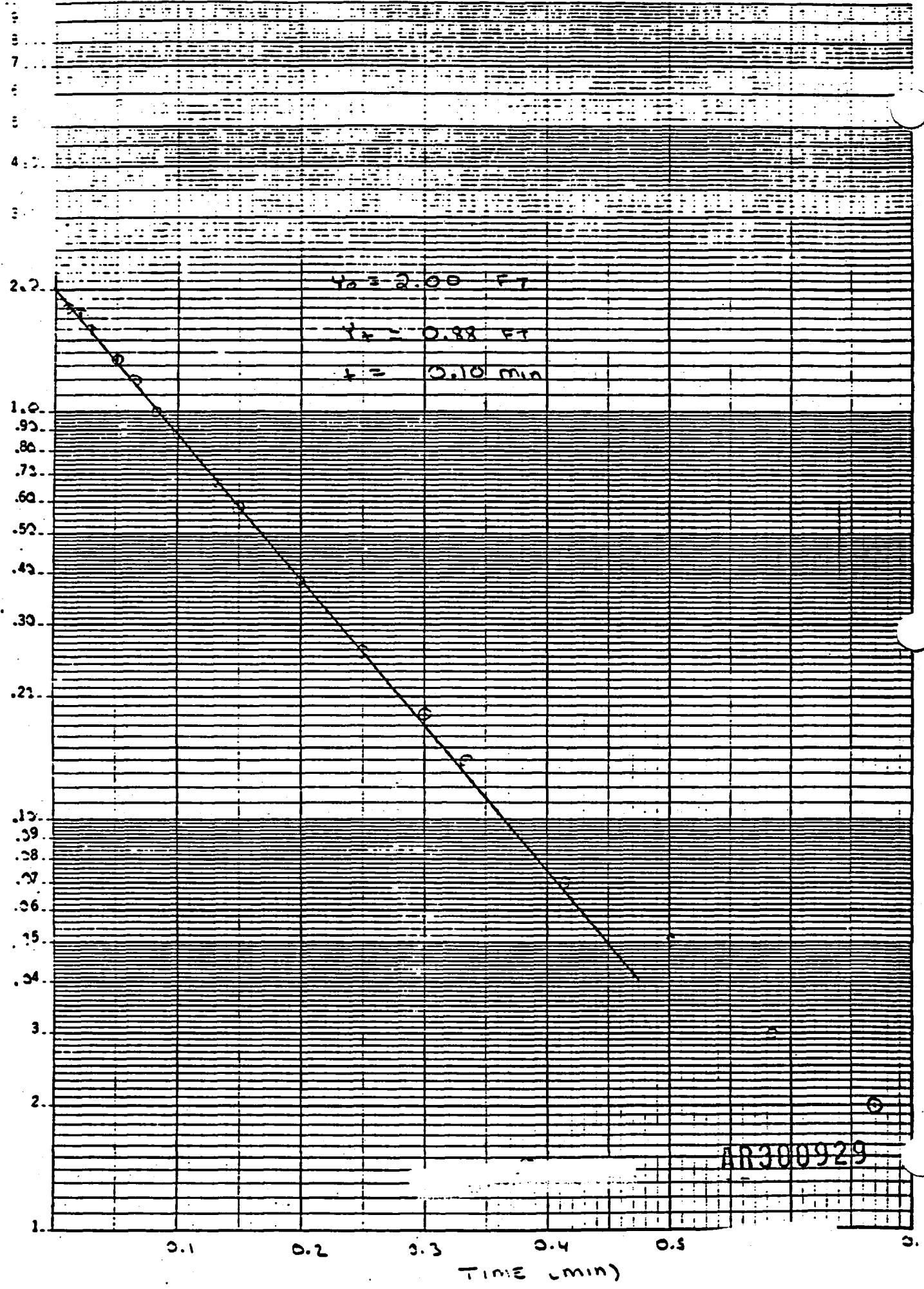
AR300928

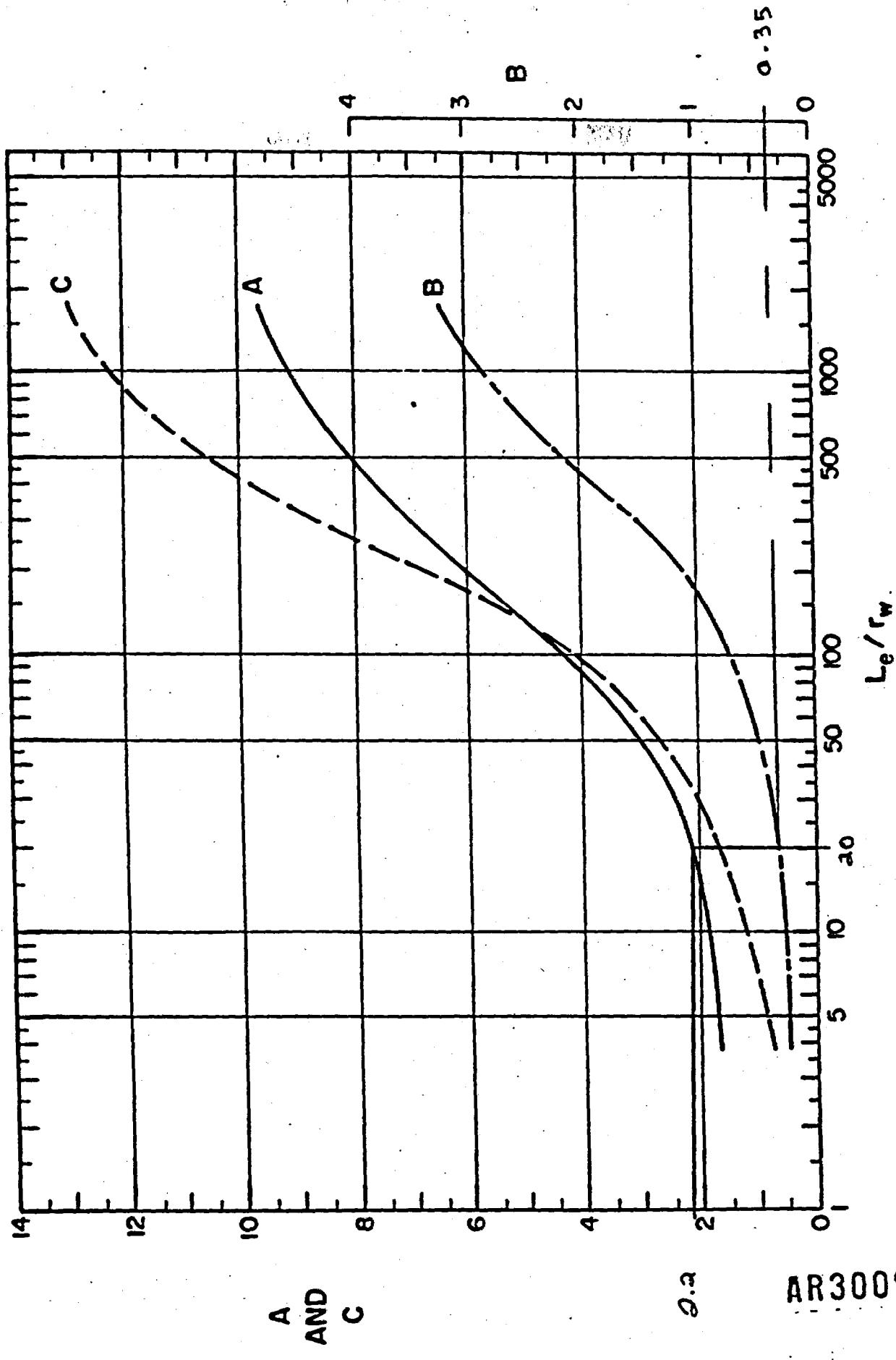
LF-14-23

E=44 F=44

314

KOE SEMI-LOGARITHMIC 3 CYCLES X 10 DIVISIONS
KELFEL & ESSER CO MADE IN U.S.A.





A
AND
C

0.3

AR300930

AR300931

APPENDIX I
**CONTINUOUS RECORDER STRIP CHARTS
AND BAROMETRIC PRESSURE DATA**

AR300932

Strip Chart Recording

CR - MW01 (S)

IRB 300933

(S)

← → ← → 300 - 200 - 100 - 0 - 100 - 200 - 300

Strip Chart Recording

CR - MW03 (S)

100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300 2400 2500 2600 2700 2800 2900 3000 3100 3200 3300 3400 3500 3600 3700 3800 3900 4000 4100 4200 4300 4400 4500 4600 4700 4800 4900 5000 5100 5200 5300 5400 5500 5600 5700 5800 5900 6000 6100 6200 6300 6400 6500 6600 6700 6800 6900 7000 7100 7200 7300 7400 7500 7600 7700 7800 7900 8000 8100 8200 8300 8400 8500 8600 8700 8800 8900 9000 9100 9200 9300 9400 9500 9600 9700 9800 9900 10000

48500 GPM

(S)

Strip Chart Recording

CR - mwo9(s)

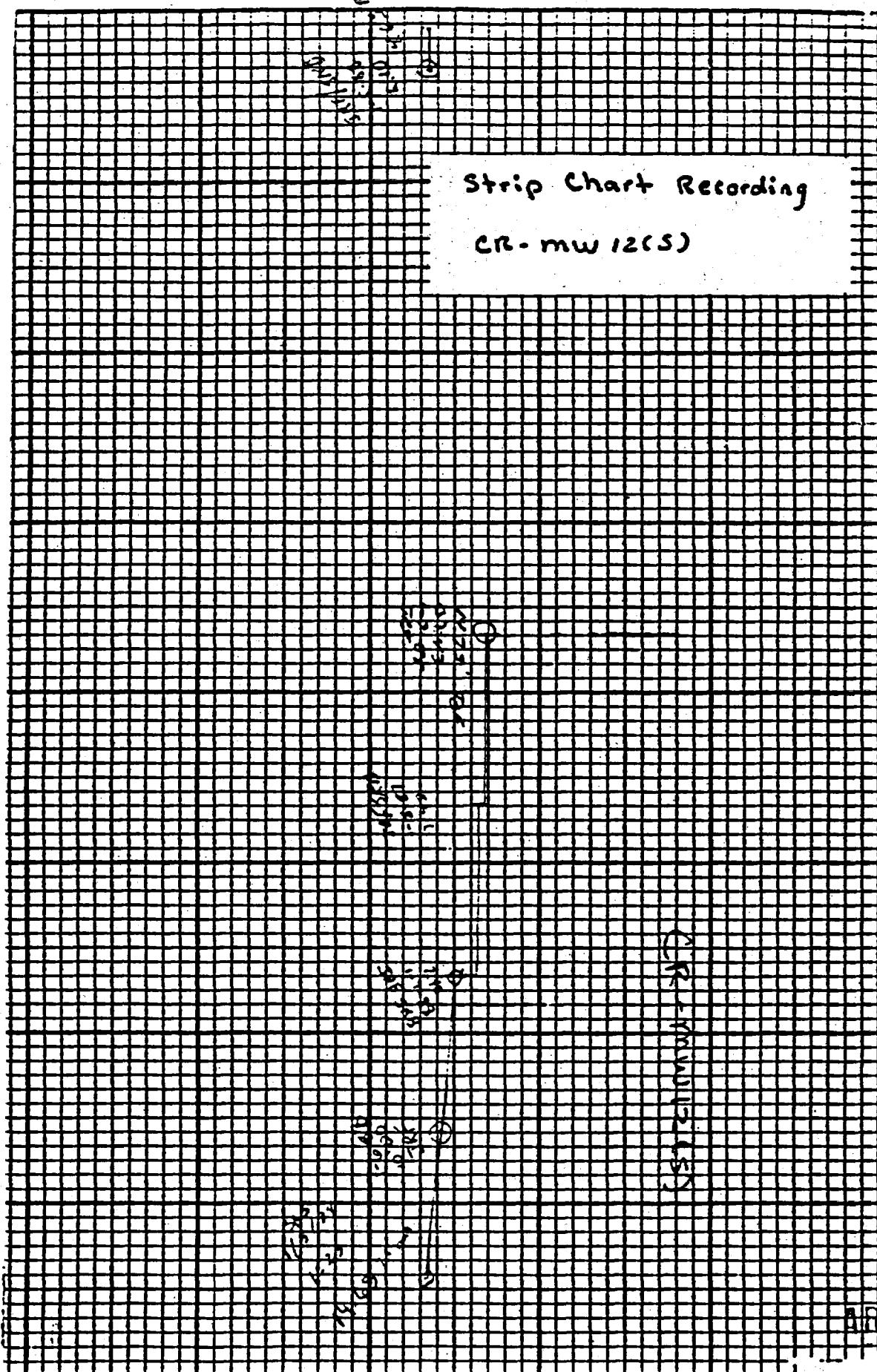
AR 300 035

(S)

Strip Chart Recording
CR. mw09(0)

AR 3009 36

ML - Separation of Inert Gases ← →



AF 300937

(S)

← C - C →
Shure Model 2500 Bi-Directional Microphone - Type F

Strip Chart Recording

CR - mw15(s)

AR300938

(S)

← 2.10 →
Date - 1972

Strip Chart Recording
CR-MW15(0)

19720309

TABLE I-1

**BAROMETRIC PRESSURE CHANGES
CROYDON TCE SITE**

January 5, 1988		January 6, 1988		January 7, 1988		January 8, 1988		January 9, 1988	
Time	Pressure								
00:50	30.09	00:30	30.39	00:50	30.56	00:50	30.44	00:50	30.00
01:50	30.11	01:50	30.38	01:50	30.54	01:50	30.40	01:50	30.03
02:50	30.14	02:50	30.39	02:50	30.59	02:50	30.37	02:50	30.05
03:50	30.16	03:50	30.38	03:50	30.60	03:50	30.32	03:50	30.06
04:50	30.18	04:50	30.39	04:50	30.61	04:50	30.30	04:50	30.07
05:50	30.21	05:50	30.40	05:50	30.63	05:50	30.27	05:50	30.10
06:50	30.24	06:50	30.41	06:50	30.65	06:51	30.25	06:50	30.12
07:50	30.27	07:52	30.43	07:53	30.68	07:50	30.21	07:51	30.18
08:50	30.29	08:52	30.44	08:52	30.69	08:50	30.19	08:50	30.19
09:50	30.31	09:52	30.45	09:50	30.69	09:50	30.15	09:52	30.23
10:50	30.32	10:53	30.45	10:53	30.69	10:50	30.13	10:50	30.22
11:50	30.30	11:50	30.44	11:50	30.66	11:50	30.09	11:50	30.21
12:50	30.28	12:53	30.41	12:53	30.63	12:50	30.02	12:53	30.18
13:50	30.28	13:53	30.41	13:52	30.60	13:50	29.98	13:50	30.20
14:50	30.28	14:51	30.41	14:53	30.60	14:50	29.97	14:50	30.20
15:50	30.30	15:50	30.42	15:50	30.58	15:52	29.96	15:52	30.22
16:50	30.32	16:50	30.43	16:50	30.58	16:52	29.96	16:52	30.22
17:50	30.33	17:50	30.45	17:50	30.59	17:50	29.98	17:50	30.23
18:50	30.34	18:50	30.48	18:50	30.59	18:50	29.97	18:50	30.23
19:50	30.35	19:50	30.50	19:50	30.57	19:53	29.99	19:50	30.25
20:50	30.36	20:50	30.51	20:50	30.57	20:50	30.00	20:50	30.25
21:50	30.38	21:50	30.53	21:50	30.56	21:51	30.00	21:50	30.25
22:50	30.40	22:50	30.54	22:50	30.54	22:53	29.99	22:50	30.26
23:50	30.39	23:50	30.55	23:50	30.50	23:50	29.99	23:50	30.28

AR 300940

J

AR300941

APPENDIX J
PHASE I RI ANALYTICAL DATA

- Table 1: REM III Monitoring Well Analyses
Table 2: Rohm & Haas Monitoring Well Analyses
Table 3: Residential Well Analyses
Table 4: Surface Water Analyses
Table 5: Sediment Analyses
Table 6: Soil Analyses

AR300942

QUALIFIERS

INORGANIC ANALYSES

- B - Indicates that the reported value is less than the Contract Required Detection Limit (CRDL) but greater than the Instrument Detection Limit (IDL).
- E - The reported value is estimated because of the presence of interference.
- M - Duplicate injection precision not met.
- N - Spiked sample recovery not within control limits.
- S - The reported value was determined by the Method of Standard Additions (MSA).
- U or ND - Analyte was analyzed for but not detected above the IDL.
- NA - Analyte was not analyzed for.
- W - Post-digestion spike for Furnace AA analysis is out of control limits (85 to 115%), while sample absorbance is less than 50% of spike absorbance.
- *
- + - Duplicate analysis not within control limits.
- + - Correlation coefficient for the MSA is less than 0.995.

ORGANIC ANALYSES

- U or ND - Indicates compound was analyzed for but not detected above the IDL.
- J - Indicates an estimated value. The actual value may be higher or lower.
- C - This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides $\geq 10 \text{ ng}/\mu\text{l}$ in the final extract shall be confirmed by GC/MS.
- B - This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.
- NA - Analyte was not analyzed for.

AR300943

TABLE I CROYDON TCE SITE
GROUNDWATER ANALYSES - REM III MONITORING WELLS

SAMPLE NUMBER:	MW1(S)-1	MW1(D)-1	MW2(S)-1	MW2(D)-1	MW3(S)-1	MW3(D)-1	MW4(S)-1	MW4(D)-1
TRAFFIC REPORT NUMBER:								
DESCRIPTION:								
UNITS:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
DATE SAMPLED:	12/10/87	12/10/87	12/09/87	12/09/87	12/08/87	12/08/87	12/10/87	12/10/87
NO VOLATILES see								
PP	CAS NO	COMPOUND						
4V	71-43-2	BENZENE	ND	ND	ND	ND	ND	ND
H6V	108-88-3	TOLUENE	R	ND	ND	ND	R	ND
	95-47-6	TOTAL AYLENES	ND	ND	ND	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	0.13	ND	ND	ND	ND	1.2J
14V	79-00-5	1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
10V	75-34-3	1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
10V	107-06-2	1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
H5V	127-18-4	TETRACHLOROETHANE	0.3J	ND	ND	ND	ND	0.2J
H7V	79-01-6	TRICHLOROETHENE	1.7J	0.6J	ND	ND	ND	0.2J
29V	75-35-4	1,1-DICHLOROETHENE	ND	ND	ND	ND	ND	ND
23V	67-66-3	CHLOROFURO	0.4J	ND	ND	ND	ND	0.9J
44V	75-09-2	METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
48V	75-27-4	BROMODICHLOROETHANE	ND	ND	ND	ND	ND	ND
		cis-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND

AR300944

TABLE I CROYDON TCE SITE GROUNDWATER ANALYSES - REM III MONITORING WELLS

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER :
DESCRIPTION:
UNITS:
DATE SAMPLED:

ESTATE PLANNING

COMMUNIQUE

卷之三

50-29-3 4.41-6667

ND ND ND ND ND

ND

ND

ND

ND

ON

ND

ND

50-29-3
4.4.-667

AR300945

TABLE 1 CROTON TCE SITE
GROUNDWATER ANALYSES - RYM III MONITORING WELLS

SAMPLE NUMBER :	MW1(S)-1	MW1(D)-1	MW2(S)-1	MW2(D)-1	MW3(S)-1	MW3(D)-1
TRAFFIC REPORT NUMBER:						
DESCRIPTION:						
UNITS:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
DATE SAMPLED:	12/10/87	12/10/87	12/09/87	12/09/87	12/08/87	12/10/87
see INORGANICS see						
PP	CAS NO	COMPOUND				
1		ALUMINUM				
2		ANTIMONY				
3		ARSENIC				
4		RARIUM				
5		BERYLLIUM				
6		CADIUM				
7		CALCIUM				
8		CHROMIUM				
9		CORALT				
10		COPPER				
11		IRON				
12		LEAD				
13		MAGNESIUM				
14		MANGANESE				
15		MERCURY				
16		NICKEL				
17		POTASSIUM				
18		SELENIUM				
19		SILVER				
20		SODIUM				
21		VANADIUM				
22		ZINC				
23		CYANIDE				

AR300946

TABLE I GROTON TCE SITE
GROUNDWATER ANALYSES - REM 111 MONITORING WELLS

SAMPLE NUMBER :	TRAFFIC REPORT NUMBER:	MW4(D)-1	MW5(S)-1	MW5(S)-1A	MW5(D)-1	MW5(D)-1A	MW6(S)-1	MW6(D)-1
DESCRIPTION:			DUPLICATE					
UNITS:		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
DATE SAMPLED:		12/10/87	12/08/87	12/08/87	12/08/87	12/08/87	12/10/87	12/10/87
see VOLATILES sec.								
PP	CAS NO	COMPOUND						
4V	71-43-2	benzene	ND	ND	ND	ND	ND	ND
R6V	108-88-3	toluene	ND	ND	ND	ND	ND	ND
	95-47-6	TOTAL AROMATICS	ND	ND	ND	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	1.8J	ND	ND	7.4	7.0	0.2J
14V	79-00-5	1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND
16V	75-31-3	1,1-DICHLOROETHANE	ND	ND	ND	1.2J	0.6J	0.3J
10V	107-06-2	1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
R5V	127-18-4	TETRACHLOROETHENE	0.4J	ND	ND	4.1J	0.3J	1.9J
R7V	79-01-6	TRICHLOROETHENE	0.3J	0.5J	0.4J	80	70	2.3J
25V	75-35-4	1,1-DICHLOROETHENE	0.2J	ND	ND	1.1J	1.6J	0.4J
23V	67-06-3	CHLOROTOLUENE	0.5J	2.3J	ND	ND	ND	0.6J
44V	75-09-2	METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND
49V	75-27-4	BROMOTRICHLOROETHANE	ND	ND	ND	ND	ND	ND
		CIS-1,2-DICHLOROETHENE						

AR300948

TABLE I CROWN TCE SITE - COLUMNAR ANALYSES - REM III MONITORING MELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION :
UNITS :
DATE SAMPLED :

MHS(D)-1	MHS(S)-1	MHS(S)-1A	MHS(D)-1A	MHS(S)-1A	MHS(D)-1A	MHS(S)-1	MHS(D)-1
ug/L 12/10/87	ug/L 12/08/87	DUPLICATE ug/L 12/08/87	ug/L 12/08/87	ug/L 12/09/87	ug/L 12/09/87	ug/L 12/10/87	ug/L 12/10/87

ESTIQUETTES

HP	CAS NO	COMPOUND
322P	50-28-3	4,4'-DDT

AR300949

TABLE 1 CROTON TCE SITE
GROUNDWATER ANALYSES - REM III MONITORING WELLS

SAMPLE NUMBER :	MW4(D)-1		MW5(S)-1A		MW5(D)-1		MW5(B)-1		MW5(D)-1A		MW5(D)-1	
TRAFFIC REPORT NUMBER:	MC9131/440		MC9133/442		MC9132/441		TOT/DISS		TOT/DISS		TOT/DISS	
DESCRIPTION:	TOT/DISS		UG/L		UG/L		UG/L		UG/L		UG/L	
UNITS:	12/08/87		12/08/87		12/08/87		12/08/87		12/08/87		12/08/87	
DATE SAMPLED:	12/10/87		12/10/87		12/10/87		12/10/87		12/10/87		12/10/87	
see INORGANICS etc	PP	CAS NO	COMPOUND									
1			ALUMINUM	129000/ND			110000/ND		22300/ND		ND/ND	ND/ND
2			ANTIMONY	25/ND			ND/ND		4.3/ND		4.3/ND	4.3/ND
3			ARSENIC	7.6/ND			8.0/ND		113/64		NA	NA
4			BARIUM	610/65			668/60		ND/ND		NA	NA
5			BERYLLIUM	6.4/ND			5.5/ND		ND/ND		NA	NA
6			CARMITUM	ND/ND			ND/ND		ND/ND		NA	NA
7			CALCIUM	28100/26700			28300/26600		13400/12200		NA	NA
8			CHROMIUM	202/ND			161/ND		ND/ND		NA	NA
9			COBALT	160/25			130/28		27/21		NA	NA
10			COPPER	132/ND			112/ND		ND/ND		NA	NA
11			IRON	257000/ND			221000/ND		3600/668		NA	NA
12			LEAD	68/ND			64/6.18		6.8B/ND		NA	NA
13			MAGNESIUM	42600/21600			40500/21700		9140/8220		NA	NA
14			MANGANESE	11300/4100			10600/4150		18100/1540		NA	NA
15			MERCURY	ND/ND			ND/ND		ND/ND		NA	NA
16			NICKEL	160/ND			160/ND		ND/ND		NA	NA
17			POTASSIUM	13000/2850			11100/33400		3190/2320		NA	NA
18			SELENIUM	ND/ND			ND/ND		ND/ND		NA	NA
19			SILVER	ND			ND/ND		ND/ND		ND	ND
20			SODIUM	17700/15600			17400/17300		14500/12000		NA	NA
21			VANADIUM	279/ND			212/ND		ND/ND		NA	NA
22			ZINC	474/ND			408/ND		33/22		NA	NA
23			CYANIDE	ND/NA			ND/NA		ND/NA		NA	NA

AR300950

TABLE 1 CROTON TCE SITE
GROUNDWATER ANALYSES - ROW III MONITORING WELLS

SAMPLE NUMBER :	TRAFFIC REPORT NUMBER:	MW7(3)-1	MW7(D1)-1	MW8(S)-1	MW8(D)-1	MW9(S)-1	MW9(D)-1	MW9(D)-1R	MW9(D)-1I
DESCRIPTION:									
UNITS:		UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
DATE SAMPLED:		12/09/87	12/10/87	12/10/87	12/09/87	12/10/87	12/07/87	12/07/87	12/07/87
see VOLATILES see									
PP	CAS NO	COMPOUND							
4V	71-43-2	BENZENE	ND	ND	ND	ND	ND	ND	ND
86V	106-60-3	TOLUENE	ND	ND	ND	ND	ND	ND	ND
	95-47-6	TOTAL KYLINE'S	ND	ND	ND	ND	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	ND	ND	7.0	ND	ND	ND	ND
14V	79-00-5	1,1,2-TRICHLOROETHANE	ND	ND	2.1J	ND	ND	ND	ND
10V	75-34-3	1,1-DICHLOROETHANE	ND	ND	2.1J	ND	ND	ND	ND
10V	107-06-2	1,2-DICHLOROETHANE	ND	ND	0.2J	ND	ND	ND	ND
RSV	127-18-4	TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	ND
87V	79-01-6	TRICHLOROETHENE	ND	ND	1.2J	ND	ND	ND	ND
29V	75-35-4	1,1-DICHLOROETHENE	ND	ND	0.3J	ND	ND	ND	ND
23V	67-66-3	CHLOROFORM	ND	ND	1.1J	ND	ND	ND	ND
44V	75-09-2	METHYLENE CHLORIDE	ND	ND	3.4J	ND	ND	ND	ND
48V	75-27-4	BIS(2,2-DICHLOROETHANE)	ND	ND	1.5J	ND	ND	ND	ND
		CIS-1,2-DICHLOROETHENE	ND	ND	1.7J	ND	ND	ND	ND

AR300952

TABLE I CADILLAC TCE SITE GROUNDWATER ANALYSES - BM 111 MONITORING WELLS

SAMPLE NUMBER :	MW7(S)-1	MW7(D)-1	MW8(S)-1	MW8(D)-1	MW9(S)-1	MW9(D)-1R
TRAFFIC REPORT NUMBER:						
DESCRIPTION:						
UNITS:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
DATE SAMPLED:	12/09/87	12/10/87	12/10/87	12/10/87	12/10/87	12/07/87
*** PESTICIDES ***						
PP	CAS NO	COMPOUND				
ND	ND	ND	ND	ND	ND	ND
92P	50-29-3	4,4'-DDT				

AR300953

TABLE I CROTTON TCE SITE GROUNDWATER ANALYSES - REN III MONITORING WELLS

SAMPLE NUMBER :	MM7(3)-1	MM7(D)-1	MM7(G)-1	MM7(D)-1R	MM7(S)-1	MM7(D)-1R	MM7(G)-1
TRAFFIC REPORT NUMBER:							
DESCRIPTION:							
UNITS:							
DATE SAMPLED:	12/09/87	12/10/87	12/10/87	12/10/87	12/10/87	12/10/87	12/07/87
see INORGANICS ***							
PP	CAS NO	COMPOUND					
1		ALUMINUM					
2		ANTIMONY					
3		ARSENIC					
4		BARIUM					
5		BERYLLIUM					
6		CADMIUM					
7		CALCIUM					
8		CHROMIUM					
9		COBALT					
10		COPPER					
11		IRON					
12		LEAD					
13		MAGNESIUM					
14		MANGANESE					
15		MERCURY					
16		NICKEL					
17		POTASSIUM					
18		SELENIUM					
19		SILVER					
20		SODIUM					
21		VANADIUM					
22		ZINC					
23		CYTANIDE					

AR300954

TABLE I CROYDON TCE SITE GROUNDWATER ANALYSES - REM III MONITORING WELLS

TRIUMPHIC NUMBER : SAMPLE NUMBER :

卷之三

卷之三

DATE SAMPLED:

CHEMICAL PARAMETERS AND

*** GEOCHEMICAL PARAMETERS ***			MW7(S)-1	MW8(D)-1	MW8(D)-1B	MW9(S)-1	MW9(D)-1	MW9(D)-1B
HP	CAS NO	COMPOUND	12/09/87	12/10/87	12/10/87	12/07/87	12/07/87	12/07/87
		AMMONIA (as N)	NA	NA	NA	NA	NA	NA
		CHLORIDE	NA	NA	NA	NA	NA	NA
		NITRITE/NITRATE (as N)	NA	NA	NA	NA	NA	NA
		SULFATE	NA	NA	NA	NA	NA	NA
		TDS	NA	NA	NA	NA	NA	NA
		TOX (as Cl)	NA	NA	NA	NA	NA	NA
		TSS	NA	NA	NA	NA	NA	NA
		BOD	NA	NA	NA	NA	NA	NA
		ALKALINITY (CaCO_3)	NA	NA	NA	NA	NA	NA

AR300955

TABLE I CROYDON TCE SITE
GROUNDMATER ANALYSES - REN III MONITORING WELLS

SAMPLE NUMBER :	MW10(D)-1			MW11(S)-1			MW11(D)-1			MW12(S)-1			MW13(D)-1			MW13(S)-1			MW13(D)-1		
TRAFFIC REPORT NUMBER:	PP	CAS NO	COMPOUND	PP	CAS NO	COMPOUND	PP	CAS NO	COMPOUND	PP	CAS NO	COMPOUND	PP	CAS NO	COMPOUND	PP	CAS NO	COMPOUND	PP	CAS NO	COMPOUND
DESCRIPTION:	4V	71-43-2	ARENENE																		
UNITS:	REV	106-88-3	TOLUENE	R																	
DATE SAMPLED:		95-17-6	TOTAL XYLYNES	ND																	
*** VOLATILES ***	1IV	71-55-6	1,1,1-TRICHLOROETHANE	R																	
	1AV	79-00-5	1,1,2-TRICHLOROETHANE	0.63																	
	10V	75-34-3	1,1-DICHLOROETHANE	ND																	
	10V	107-06-2	1,2-DICHLOROETHANE	ND																	
	15V	127-18-4	TETRACHLOROETHENE	ND																	
	87V	79-01-6	TRICHLOROETHENE	ND																	
	29V	75-35-4	1,1-DICHLOROETHENE	ND																	
	23V	67-66-3	CHLOROFORM	ND																	
	44V	75-09-2	METHYLENE CHLORIDE	0.03																	
	48V	75-27-4	BROMODICHLOROETHANE	ND																	
			CIS-1,2-DICHLOROETHENE	ND																	

AR300956

TABLE I CROTON TEE SITE GROUNDWATER ANALYSES - REN III MONITORING WELLS

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER:
DESCRIPTION:
UNITS:
DATE SAMPLED:

AR300958

TABLE I CROYDON TCE SITE GROUNDWATER ANALYSES - REM III MONITORING WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION : UNITS : DATE SAMPLED :

AR300959

TABLE I CRYSTON TCE SITE GROUNDWATER ANALYSES - REQ III MONITORING WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION : UNITS : DATE SAMPLED :

SAMPLE NUMBER :		TRAFFIC REPORT NUMBER:	
DESCRIPTION:			
UNITS:	DATE SAMPLED:		
SEE VOLATILES PAGE			
TPP	CAS NO	COMPOUND	
4V	71-43-2	XYLOL	
R5V	101-68-3	TOLUENE	
	95-47-6	TOTAL AROMATICS	
11V	71-55-6	1,1,1-TRICHLOROETHANE	
14V	79-00-5	1,1,2-TRICHLOROETHANE	
10V	75-34-3	1,1-DICHLOROETHANE	
10V	107-06-2	1,2-DICHLOROETHANE	
R5V	127-18-4	TETRACHLOROETHENE	
H7V	79-01-6	TRICHLOROETHENE	
	75-35-4	1,1-DICHLOROETHANE	
23V	67-66-3	CHLOROPROPANE	
	75-09-2	METHYLENE CHLORIDE	
44V	75-27-4	AROMATIC CHLOROMETHANE	
44V		CIS-1,2-DICHLOROETHENE	

AR300960

TABLE I CROYDON TCE SITE GROUNDWATER ANALYSES - REM III MONITORING WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION : UNITS : DATE SAMPLED :

PHOTOCIDES

pp CAS NO Compound

92B 50-28-1 1-1-2010

AR300961

TABLE I CROTON TCE SITE
GROUNDWATER ANALYSES - REM III MONITORING WELLS

SAMPLE NUMBER :	MW14(S)-1			MW15(S)-1			MW14(D)-1			MW15(D)-1			MW16-1			MW16-2		
TRAFFIC REPORT NUMBER:																		
DESCRIPTION:																		
UNITS:																		
DATE SAMPLED:	12/07/87			12/07/87			12/07/87			12/07/87			12/07/87			12/07/87		
INORGANICS ***																		
PP.	CAS NO	COMPOUND																
1		ALUMINUM																
2		ANTIMONY																
3		ARSENIC																
4		BARIUM																
5		BERYLLOUM																
6		CADMIUM																
7		CALCIUM																
8		CHROMIUM																
9		CHROMIUM																
10		COPPER																
11		IRON																
12		LEAD																
13		MAGNESIUM																
14		MANGANESE																
15		MERCURY																
16		NICKEL																
17		POTASSIUM																
18		SELENIUM																
19		SILVER																
20		SODIUM																
21		VANADIUM																
22		ZINC																
23		CYANIDE																

AR300962

TABLE 1 CEDARON TCE SITE GROUNDWATER ANALYSES - ROW III MONITORING WELLS

SAMPLE NUMBER :	MW14(S)-1	MW15(S)-1	MW14(D)-1	MW15(D)-1	MWB-1	MWPB-2	MWTB-1
TRAFFIC REPORT NUMBER:							
DESCRIPTION:							
UNITS:							
DATE SAMPLED:	12/07/87	12/07/87	12/07/87	12/07/87	12/08/87	12/15/87	12/07/87
*** GEOCHEMICAL PARAMETERS ***							
PP	CAS NO	COMPOUND					
		AMMONIA (as N)	NA	NA	ND	<1	
		CHLORIDE	NA	NA	ND/ND	ND/ND	
		NITRITE/NITRATE (as N)	NA	NA	<10	<10	
		SULPHATE	NA	NA	NA	NA	
		TDS	NA	NA	NA	NA	
		TOC (as C)	NA	NA	NA	NA	
		TSS	NA	NA	NA	NA	
		BOD	NA	NA	NA	NA	
		ALKALINITY (CaCO ₃)	NA	NA	ND	<2	

AR300963

TABLE I CROYDON TCE SITE
GROUNDWATER ANALYSES - REV III MONITORING WELLS

SAMPLE NUMBER :		MWTB-2	MWTB-3	MWTB-4	MWTB-5
TRAFFIC REPORT NUMBER:					
DESCRIPTION:					
UNITS:					
DATE SAMPLED:	12/08/87	UG/L	UG/L	UG/L	UG/L
		12/08/87	12/09/87	12/10/87	12/10/87

*** VOLATILES ***

PP	CAS NO	COMPOUND	MWTB-2	MWTB-3	MWTB-4	MWTB-5
47	71-43-2	BENZENE	0.21	ND	ND	1.3J
86Y	108-88-3	TOLUENE	2.8J	ND	ND	ND
	95-47-6	TOTAL KYLENES	0.23	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	ND	ND	ND	ND
14V	79-00-5	1,1,2-TRICHLOROETHANE	ND	ND	ND	ND
10V	75-34-3	1,1-DICHLOROETHANE	ND	ND	ND	ND
10V	107-06-2	1,2-DICHLOROETHANE	ND	ND	ND	ND
85Y	127-18-4	TETRACHLOROETHENE	ND	ND	ND	ND
87V	79-01-6	TRICHLOROETHENE	ND	ND	ND	ND
29V	75-35-4	1,1-DICHLOROETHENE	ND	ND	ND	ND
23V	67-66-3	CHLOROFORAN	ND	ND	ND	ND
44V	75-09-2	METHYLENE CHLORIDE	ND	ND	0.4J	ND
		1,1,1,1-TETRAFLUOROMETHANE	ND	ND	ND	ND
48Y	75-27-4	C13-1,2-DICHLOROETHENE	ND	ND	ND	ND

AR300964

TABLE 1 CROYDON TCE SITE
GROUNDWATER ANALYSES - REM 111 MONITORING WELLS

SAMPLE NUMBER :	MWTB-2	MWTB-3	MWTB-4	MWTB-5
TRAFFIC REPORT NUMBER:				
DESCRIPTION:				
UNITS:				
DATE SAMPLED:				

*** PESTICIDES ***			
PP	CAS NO	COMPOUND	
92P	50-29-3	4,4'-DDT	ND

92P 50-29-3 4,4'-DDT

AR300965

TABLE 1 CROYDON TCE SITE
GROUNDWATER ANALYSIS - REM 111 MONITORING WELLS

SAMPLE NUMBER:	TRAFFIC REPORT NUMBER:	DESCRIPTION:	UNITS:	DATE SAMPLED:	MWTR-2	MWTR-3	MWTR-4	MWTR-5
ITEM	CAS NO	COMPOUND			12/08/87	12/09/87	12/10/87	12/10/87
NON INORGANICS .000								
1		ALUMINUM			NA	NA	NA	NA
2		ANTIMONY			NA	NA	NA	NA
3		ARSENIC			NA	NA	NA	NA
4		BARIUM			NA	NA	NA	NA
5		BERYLLIUM			NA	NA	NA	NA
6		CADMIUM			NA	NA	NA	NA
7		CALCIUM			NA	NA	NA	NA
8		CHROMIUM			NA	NA	NA	NA
9		COBALT			NA	NA	NA	NA
10		COPPER			NA	NA	NA	NA
11		IRON			NA	NA	NA	NA
12		LEAD			NA	NA	NA	NA
13		MAGNESIUM			NA	NA	NA	NA
14		MANGANESE			NA	NA	NA	NA
15		MERCURY			NA	NA	NA	ND
16		NICKEL			NA	NA	NA	NA
17		POTASSIUM			NA	NA	NA	NA
18		SELENIUM			NA	ND	ND	ND
19		SILVER			NA	NA	NA	NA
20		SODIUM			NA	NA	NA	NA
21		VANADIUM			NA	NA	NA	NA
22		ZINC			NA	NA	NA	NA
23		CYANIDE			NA	NA	NA	NA

AR300966

TABLE 2 CROTON TCE SITE GROUNDWATER ANALYSES - RUMM & HAAS MONITORING WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION :
UNITS : DATE SAMPLED :

VIOLATIONES

AR300968

TABLE 2 CROTON TCE SITE GROUNDWATER ANALYSES - BOHM & HAAS MONITORING WELLS

SAMPLE NUMBER :	CR-24-15	CR-24-7-1	CR-24-7-1A	CR-26-19	CR-26-38	CR-27-18-1	CR-27-3H-1
TRAFFIC REPORT NUMBER:							
DESCRIPTION:							
UNITS:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
DATE SAMPLED:	12/15/87	12/15/87	12/15/87	12/15/87	12/15/87	12/12/87	11/12/87
*** VOLATILES ***							
PP	CAS NO	COMPOUND					
67-64-1		ACETONE	ND	ND	ND	ND	ND
78-91-3		2-BUTANONE	ND	ND	ND	ND	ND
H6V	108-88-3	TOLUENE	1.0	1.4B	2.6B	0.6J	2.7J
H1V	71-55-6	1,1,1-TRICHLOROETHANE	ND	10	11	0.4J	1.4J
I0V	75-31-3	1,1-DICHLOROETHANE	ND	ND	ND	ND	ND
H5V	127-11-4	TETRACHLOROETHENE	ND	ND	ND	ND	ND
H7V	79-01-6	TRICHLOROETHENE	ND	ND	ND	ND	ND
H0V	156-60-5	TRANS-1,2-DICHLOROETHANE	ND	91	73	300	ND
29V	75-35-4	1,1-DICHLOROETHENE	ND	ND	ND	ND	ND
23V	67-66-3	CHLOROFUM	ND	6.9B	7.7B	0.3J	ND
		CIS-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND

AR300969

TABLE 2 CROYDON TCE SITE
GROUNDWATER ANALYSES - ROTH & HAAS MONITORING WELLS

SAMPLE NUMBER :	LP-13-1B-1	LP-13-1B-1A	LP-13-43-1	LP-14-20-1	LP-15-26-1	LP-15-37-1
TRAFFIC REPORT NUMBER:		DUPPLICATE				CQ214
DESCRIPTION:		UG/L	UG/L	UG/L	UG/L	
UNITS:	11/11/87	11/11/87	11/11/87	11/12/87	11/11/87	UG/L
DATE SAMPLED:						11/11/87
*** VOLATILES ***						
PP	CAS NO	COMPOUND				
11V	71-55-6	1,1,1-TRICHLOROETHANE	ND	7.3	17	1.0J
10V	75-34-3	1,1-DICHLOROETHANE	ND	1.0J	2.0J	ND
85V	127-18-4	TETRACHLOROETHENE	ND	0.9J	0.7J	ND
RTV	79-01-6	TRICHLOROETHENE	ND	ND	1.0J	ND
29V	75-35-4	1,1-DICHLOROETHENE	ND	51	120	1.2J
23V	67-66-3	CHLOROTFORM	ND	1.6J	3.2J	ND
51V	124-48-1	CHLORODIFLUOROMETHANE	ND	8.9	0.6J	ND
			ND	ND	0.3J	ND
*** BASE/NEUTRALS ***						
PP	CAS NO	COMPOUND				
66B	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	ND	ND	ND	4J

AR300970

TABLE 2 CROYDON TCE SITE GROUNDWATER ANALYSES - BORN & HAAS MONITORING WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION : DATE SAMPLED :
UNITS :

LF-13-18-1 LF-13-18-1
DUPLICATE
UG/L UG/L
11/11/97 11/11/97

LF-13-18-1	LF-13-18-1A
DUPPLICATE	
UG/L	11/11/87
UG/L	11/11/87

PESTICIDES 101

pp CAS NO compound

900P 60-57-1

ND ND ND ND

UN

0-30

0-28

AR300971

TABLE 2 CROYDON TCE SITE
GROUNDWATER ANALYSES - ROTH & HAAS MONITORING WELLS

SAMPLE NUMBER :	TRAFFIC REPORT NUMBER:	LP-13-18-1A	LP-13-12-1	LP-14-20-1	LP-15-37-1
DESCRIPTION:	MCR422/427	MCR421/426	MCR413/423	MCR411/424	
UNITS:	TOTAL/DISS	TOTAL/DISS	TOTAL/DISS	TOTAL/DISS	
DATE SAMPLED:	UG/L	UG/L	UG/L	UG/L	
11/11/87	11/11/87	11/11/87	11/12/87	11/11/87	11/11/87
<hr/>					
see INORGANICS see					
PP	CAS NO	COMPOUND			
1	36401/100	3260/100	ND/178)	ND/161	ND/160
4	11051/1841	(1001/214	ND/31	NA	1891/921
7	6770/7590	8600/7650	2720/128901	NA	1781/220
9	1101/100	1121/MD	ND/ND	7190/6380	6600/6620
10	39/26	38/MD	ND/ND	ND/ND	ND/ND
11	10700/3633	9640/3243	236/55683	NA	ND/J2
12	16J/14.1	11/10	5.1J/13.51	NA	375/5683
12	16J/14.1	11/10	5.1J/13.51	NA	5.2J/3.83
13	9070/8420	8650/8440	11780/11870	NA	8780/88750
14	544/47	469/44	32/33	NA	11/111
16	1171/ND	ND/ND	ND/1141	70/15	ND/ND
17	118401/11540	117701/11350	16261/6221	NA	112201/11160
20	13400/12500	12800/12800	8160/8630	NA	9690/10100
23	1191/ND	1151/ND	ND/MD	ND/ND	ND/ND
24	44/29	38/27J	ND/MD	ND/MD	ND/MD
25	ND/ND	ND/ND	ND/ND	ND/ND	ND/ND

AR300972

TABLE 2 CROWDOUT TECHNIQUE - CROWDOUT ANALYSES - BORN & HALL'S MONITORING METHODS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
INSCRIPTION :
UNITS : DATE SAMPLED :

THE GEOCHEMICAL PARMETER 333

PP	CAS NO	COMPOUND
----	--------	----------

AMMONIA (as N)
CHLORIDE
NITRATE/NITRATE (as
SULFATE
TDS
TOC
TSS
BOD
ALKALINITY (CaCO_3)

AR300973

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER:
DESCRIPTION:
UNITS:
DATE SAMPLED:

	RW1-1 MC0400	RW1-2 MC0401	RW2-1 MC0402	RW3-1 MC0403	RW4-1 MC0404	RW5-1 MC0405
	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
	10/28/87	05/H/88	10/28/87	10/28/87	10/28/87	10/28/87

*** INORGANICS ***

PP CAS NO COMPOUND

1		ALUMINUM	ND	ND	ND	ND
2		ARSENIC	ND	ND	ND	ND
3		BARIUM	[561L	[641L	[321L	[641L
4		CADMIUM	ND	ND	ND	ND
5		CALCIUM	[4120]	[2440]	11061L	ND
6		COPPER	ND	ND	ND	ND
7		IRON	19000	13000	11000	11000
8		LEAD	104K	191	1270J	200
9		MAGNESIUM	[2650]	[1910]	4266J	70WJ
10		MANGANESE	131	178	[4.6]K	13K
11		MERCURY	0.20	0.40	[4.6]K	5.8K
12		NICKEL	[161]	433J	1270J	57
13		POTASSIUM	[967]	14.9K	11000	11000
14		SODIUM	[11310]	9180	11000	11000
15		TIN	9910	[19.0]	1290J	1290J
16		VANADIUM	ND	0.20	ND	ND
17		ZINC	102J	[3880]	115J	115J
18		(CYANIDE)	ND	1541J	[3780]	[3780]
19				6740	101J	10000
20				7310	26340	14230
21				NA	NA	NA
22				NA	ND	ND
23				ND	[112]	ND
24				106	29J	69J
				ND	ND	ND

AR300975

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :	RW1-1	RW1-2	RW2-1	RW3-1	RW4-1	RW5-1	RW6-1
TRAFFIC REPORT NUMBER:							
DESCRIPTION:							
UNITS:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
DATE SAMPLED:	10/28/87	05/18/88	10/28/87	10/28/87	10/28/87	10/28/87	10/28/87
*** CHEMICAL PARAMETERS ***							
PP	CAS NO	COMPOUND					
			AMMONIA (as N)	NA	NA	NA	NA
			CHLORIDE	NA	NA	NA	NA
			NITRITE/NITRATE (as N)	NA	NA	NA	NA
			SULFATE	NA	NA	NA	NA
			TDS	NA	NA	NA	NA
			TOC	NA	NA	NA	NA
			TSS	NA	NA	NA	NA
			PPM ALKALINITY (CaCO ₃)	NA	NA	NA	NA

AR300976

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : MCQ410
 TRAFFIC COUNT NUMBER:
 DESCRIPTION:
 UNITS:
 DATE SAMPLED:

RW6-1A	RW7-1	RW7-2	RW7-3
MCQ410	MCQ407	MCQ407	MCQ407
DUPLICATE	DUPLICATE	DUPLICATE	DUPLICATE
UG/L	UG/L	UG/L	UG/L
10/28/87	10/28/87	10/28/87	10/28/87

*** INORGANICS ***

PP CAS NO COMPOUND

1 ALUMINUM	ND	ND	ND
3 ARSENIC	ND	ND	ND
4 BARIUM	1631L	1521L	1521L
5 CADMIUM	ND	ND	ND
7 CALCIUM	10400	7800	17800
10 COPPER	212	121	36
11 IRON	6334J	ND	ND
12 LEAD	11K	13	5.4K
13 MAGNESIUM	7970	13960J	4540
14 MANGANESE	64	30	101
15 MERCURY	ND	0.20	ND
16 NICKEL	ND	1121	ND
17 POTASSIUM	1758J	1788J	12650J
20 SODIUM	96650	9160	9200
22 TIN	NA	NA	NA
23 VANADIUM	ND	19.91	ND
24 ZINC	46J	ND	ND
		1.1	21J
			12

RW6-1A	RW7-1	RW7-2	RW7-3
MCQ411	MCQ407	MCQ407	MCQ407
DUPLICATE	DUPLICATE	DUPLICATE	DUPLICATE
UG/L	UG/L	UG/L	UG/L
10/28/87	10/28/87	10/28/87	10/28/87

RW6-1A	RW7-1	RW7-2	RW7-3
MCQ411	MCQ407	MCQ407	MCQ407
DUPLICATE	DUPLICATE	DUPLICATE	DUPLICATE
UG/L	UG/L	UG/L	UG/L
10/28/87	10/28/87	10/28/87	10/28/87

AR300978

CROWTOWNE TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :		TRAFFIC REPORT NUMBER:			
DESCRIPTION:					
UNITS:					
DATE SAMPLED:					
ITEM	CAS NO	COMPOUND			
AMMONIA (as N)					
CHLORIDE					
NITRITE/NITRATE (as N)					
SULFATE					
TDS					
TOC					
TSS					
ROD					
ALKALINITY (CaCO ₃)					

AR300979

CROWN TEE TANIE 3 - RESIDENTIAL WILLS

SAMPLE NUMBER :
SERIAL NUMBER OF REPORT NUMBER :
REQUESTER :
UNITS :
NAME OF SAMPLE :
DATE SAMPLED :

VOLATILES ***

AR300980

CHAYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER:
DESCRIPTION:
UNITS:
DATE SAMPLED:

	RW11-1	RW12-1	RW13-1	RW14-1	RW15-1	RW16-1	RW17-1
	UG/L 10/29/87	UG/L 10/28/87	UG/L 10/29/87	UG/L 10/29/87	UG/L 10/29/87	UG/L 10/29/87	UG/L 10/29/87

*** INORGANICS ***

P# CAS NO COMPOUND

1		ALUMINUM
2		ARSENIC
3		BARIUM
4		CAIUM
5		CALCIUM
6		COOPER
7		IRON
8		LEAD
9		MAGNESIUM
10		MANGANESE
11		MERCURY
12		NICKEL
13		POTASSIUM
14		SODIUM
15		TIN
16		VANADIUM
17		ZINC
18		CYANIDE
19		
20		
21		
22		
23		
24		

AR300981

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER:
DESCRIPTION:
UNITS:
DATE SAMPLED:

PP	CAS NO	COMPOUND	RW18-2	RW19-2	RW20-2	RW21-2	RW22-2	RW22-2A	RW23-1
			UG/L 10/28/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 11/02/87

*** VOLATILES ***

PP	CAS NO	COMPOUND	RW18-2	RW19-2	RW20-2	RW21-2	RW22-2	RW22-2A	RW23-1
			UG/L 10/28/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 11/02/87
4V	71-43-2	BENZENE	ND						
H6V	106-88-3	TOLUENE	0.17B	0.40B	0.9B	2.2B	ND	1.6B	0.06B
3BV	100-41-4	ETHYLBENZENE	ND						
7V	104-90-7	CHLOROBENZENE	ND						
11V	71-55-6	1,1,1-TRICHLOROETHANE	ND						
14V	79-00-5	1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	0.32B
10V	75-34-3	1,1-DICHLOROETHANE	ND						
10V	107-06-2	1,2-DICHLOROETHANE	ND						
85V	127-18-4	TETRACHLOROETHENE	ND	ND	ND	ND	ND	ND	0.14
87V	79-01-6	TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	0.01B
30V	156-60-5	TRANS-1,2-DICHLOROETHENE	0.004	ND	ND	ND	ND	ND	ND
29V	75-35-4	1,1-DICHLOROETHENE	ND						
68V	75-01-4	VINYL CHLORIDE	ND						
6V	56-23-5	CARBON TETRACHLORIDE	ND						
23V	67-66-3	CHLOROFORM	0.03B	ND	ND	ND	ND	ND	0.31B
14V	75-09-2	METHYLENE CHLORIDE	0.15B	ND	ND	ND	ND	ND	0.21B
32V	78-87-5	1,2-DICHLOROPROPANE	ND						
4HV	75-27-4	BROMADICHLOROETHANE	ND						
		TRICHLOROFUROMETHANE	ND						

*** BASE/NEUTRALS ***

PP	CAS NO	COMPOUND	RW18-2	RW19-2	RW20-2	RW21-2	RW22-2	RW22-2A	RW23-1
			UG/L 10/28/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 11/02/87
70R	81-60-2	DIETHYL PHthalATE	NA						
67R	95-68-7	MUTYL BENZYL PHthalATE	NA	ND	ND	ND	ND	ND	ND
26B	95-50-1	1,2-DICHLOROBENZENE	ND						
27R	541-73-1	1,3-DICHLOROBENZENE	ND						
4HV	106-45-2	1,4-DICHLOROBENZENE	ND						

R300983

CROTON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :
 TRAFFIC REPORT NUMBER:
 DESCRIPTION:
 UNITS:
 DATE SAMPLED:

	RW18-2	RW19-2	RW20-2	RW21-2	RW22-2	RW23-1
UG/L 10/28/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 12/15/87	UG/L 11/02/87

*** INORGANICS ***

PPM CAS NO COMPOUND

1		ALUMINUM
2		ARSENIC
3		BARIUM
4		C'AMMIUM
5		CALCIUM
6		COPPER
7		IRON
8		LEAD
9		MAGNESIUM
10		MANGANESE
11		MERCURY
12		NICKEL
13		POTASSIUM
14		SODIUM
15		TIN
16		VANADIUM
17		ZINC
18		CYANIDE
19		
20		
21		
22		
23		
24		

AR300984

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION : UNITS : DATE SAMPLED :

RW24-1	RW25-1	RW26-1	RW27-1	RW28-1	RW29-1	RW29-1A
UG/L 11/02/87	UG/L 11/02/87	UG/L 11/02/87	UG/L 11/02/87	UG/L 11/02/87	UG/L 11/03/87	UG/L 11/03/87

VOLATILES 88

4V	71-43-2	RENZENE
AGV	108-88-3	TOLUENE
JBV	100-41-4	ETHYL BENZENE
7V	104-90-7	CHLOROBENZENE
11V	71-35-6	1,1,1-TRICHLOROETHANE
14V	79-00-5	1,1,2-TRICHLOROETHANE
10V	75-34-3	1,1-DICHLOROETHANE
10V	107-98-2	1,2-DICHLOROETHANE
ASV	127-11-4	TETRACHLOROETHANE
		TRICHLOROETHENE
		TRANS-1,2-DICHLOROETHENE
		1,1-DICHLOROPROPANE
		VINYL CHLORIDE
		CARTON TETRACHLOR
		CHLOROFORM
		METHYLENE CHLORIDE
		1,2-DICHLOROPROPAN
		AMMODICHLOROMETHYL
		TRICHLOROFLUOROMETHYL

• BASE/MATERIALS 100

PP CAS NO COMPOUND

7011	84-66-2	DIGITALYL PHthalate
66711	85-68-7	DIGITALYL PHthalate
21011	95-50-1	2-(4-CHLOROPHENYL)-
21011	541-11-1	C ₁₁ -DINITROBENZENE
21211	116-51-1	C ₁₁ -4-NITROBENZENE

MA	MA	0.02	ND	ND	0.20
A	A	.01			
A	A	.05			
A	A	.038			

NA NA ND ND ND

MA MA ND ND ND 0.02B

RM24-1
 UC/L
 11/02/87

ND	0.078
ND	ND
ND	ND
ND	2.4
ND	ND
ND	0.85
ND	ND
ND	1.1
ND	ND
ND	0.03
ND	0.103
ND	ND
ND	0.088
ND	0.368
ND	ND
ND	0.010

๑๖๓

RW25-1	RW26-1	RW27-1	RW28-1	RW29-1	RW29-1A
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
11/02/87	11/02/87	11/02/87	11/02/87	11/03/87	11/03/87
ND	ND	ND	ND	ND	ND
0.07B	ND	ND	ND	ND	0.06
ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND
4.6	3.5	0.04B	0.01B	0.01B	0.01B
0.02J	0.01	ND	ND	ND	ND
0.54	0.25	ND	ND	ND	ND
0.13	ND	ND	ND	ND	0.03B
1.4	0.47	0.05	ND	ND	0.41B
20	12	0.01B	ND	ND	0.01B
0.01	0.01	ND	ND	ND	ND
0.96	0.16	ND	ND	ND	0.16B
ND	ND	ND	ND	ND	ND
ND	ND	ND	ND	ND	ND
0.29B	0.15B	0.27B	ND	ND	ND
0.46B	0.70B	0.23B	ND	ND	0.02B
ND	ND	ND	ND	ND	0.25B
ND	ND	ND	ND	ND	0.01B

0.021

NA NA ND ND ND

卷之三

三三三三〇

۱۰

THAI
ZEN

210

PAR30

15-6
15-5
41-
06-1

20

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER:
DESCRIPTION:
UNITS:
DATE SAMPLED:

	RW21-1	RW25-1	RW26-1	RW27-1	RW28-1	RW29-1
UG/L	11/02/87	UG/L	UG/L	UG/L	UG/L	UG/L

*** INORGANICS ***

IP# CAS NO COMPOUND

1 ALUMINUM
3 ARSENIC
4 BARIUM
6 CADMIUM
7 CALCIUM
10 COPPER
11 IRON
12 LEAD
13 MAGNESIUM
14 MANGANESE
15 MERCURY
16 NICKEL
17 POTASSIUM
20 SODIUM
21 TIN
23 VANADIUM
24 ZINC
18 CYANIDE

	RW21-1	RW25-1	RW26-1	RW27-1	RW28-1	RW29-1
UG/L	11/02/87	UG/L	UG/L	UG/L	UG/L	UG/L

	RW21-1	RW25-1	RW26-1	RW27-1	RW28-1	RW29-1
UG/L	11/02/87	UG/L	UG/L	UG/L	UG/L	UG/L

	RW21-1	RW25-1	RW26-1	RW27-1	RW28-1	RW29-1
UG/L	11/02/87	UG/L	UG/L	UG/L	UG/L	UG/L

	RW21-1	RW25-1	RW26-1	RW27-1	RW28-1	RW29-1
UG/L	11/02/87	UG/L	UG/L	UG/L	UG/L	UG/L

AR300987

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION : UNITS : DATE SAMPLED :

11

REF ID: A1111111111111111111111111111111

INTRODUCTION

UNITS:

MC/L DATE SAMPLER

DATE SAMPLED:

11/02/8

卷之三

CENTRAL BIRMANIA

ପ୍ରକାଶନ କମିଶନ

THE SISIWA

卷之三

INT. - CASINO - COMPOUND

AMMONIA (as N)	CHLORIDE	NITRITE/NITRATE (as N)	SULFATE	TDS	TIC	TSS	AMM
----------------	----------	------------------------	---------	-----	-----	-----	-----

GEOMETRICAL PARAMETERS 303

CONTINUATION

卷之三

AMMONIA TEST

CHECKLIST

SULFATE.

卷之三

卷之三

ALKALINITY (C)

卷之三

AR300988

CROTON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : RW30-1
 TRAFFIC REPORT NUMBER:
 DESCRIPTION:
 UNITS:
 DATE SAMPLED: 11/03/87

PP	CAS NO	COMPOUND	RW30-1 UG/L 11/03/87	RW31-1 UG/L 11/03/87	RW32-1A UG/L 11/03/87	RW32-1B UG/L 10/28/87	RW33-1 UG/L 11/04/87	RW33-2 UG/L 11/03/87
----	--------	----------	----------------------------	----------------------------	-----------------------------	-----------------------------	----------------------------	----------------------------

*** VOLATILES ***

PP	CAS NO	COMPOUND	RW30-1 ND	RW31-1 0.068 ND	RW32-1A ND	RW32-1B 0.068 ND	RW33-1 ND	RW33-2 ND
4V	71-43-2	BENZENE	ND	0.078	0.178	0.178	ND	0.178
H6V	108-88-3	TOLUENE	ND	ND	16	41B	ND	0.068
3HV	100-41-4	ETHYLBENZENE	ND	ND	0.02	ND	ND	ND
7V	108-90-7	CHLOROBENZENE	ND	ND	ND	ND	ND	0.02
11V	71-55-6	1,1,1-TRICHLOROETHANE	0.038	0.088	ND	0.19	ND	11
14V	79-00-5	1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	0.023
10V	75-34-3	1,1-DICHLOROETHANE	ND	ND	0.03	0.02	ND	3.0
10V	107-06-2	1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND
H5V	127-14-4	TETRACHLOROETHANE	0.018	0.09	0.004	ND	ND	1.8
H7V	79-01-6	TRICHLOROETHENE	ND	0.018	0.018	5.3	ND	28J
30V	156-60-5	TRANS-1,2-DICHLOROETHENE	ND	ND	0.03	ND	ND	0.06
29V	75-35-4	1,1-DICHLOROETHENE	ND	ND	0.013	ND	ND	0.17J
H8V	75-01-4	VINYL CHLORIDE	ND	ND	0.004	ND	ND	0.19J
6V	56-23-5	CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND
23V	67-66-3	CHLOROPHOR	0.048	0.84	0.018	0.018	ND	0.19
44V	75-09-2	METHYLENE CHLORIDE	0.318	0.598	0.698	0.508	ND	0.428
32V	78-87-5	1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND
48V	75-27-4	BROMODICHLOROETHANE	ND	0.02	0.028	ND	ND	ND
		TRICHLOROFLUOROMETHANE	0.038	ND	0.038	ND	ND	0.008

*** BASE/NEUTRALS ***

PP	CAS NO	COMPOUND	RW30-1 NA	RW31-1 NA	RW32-1A NA	RW32-1B NA	RW33-1 NA	RW33-2 NA
70B	84-66-2	DIETHYL PHTHALATE	NA	NA	NA	NA	NA	NA
67H	85-68-7	BUTYL BENZYL PHTHALATE	NA	NA	NA	NA	NA	NA
	95-50-1	1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND
26B	541-73-1	1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	0.22
27R	106-46-3	1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	0.11

AR300989

CROTON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER:		RW30-1	RW31-1	RW32-1A	RW32-1B	RW33-1
DESCRIPTION:		UG/L 11/03/87	UG/L 11/03/87	DUPPLICATE UG/L 11/03/87	BOTTLE BLANK UG/L 10/20/87	BOTTLE BLANK UG/L 11/03/87
UNITS:						
DATE SAMPLED:						
*** INORGANICS ***						
PP	CAS NO.	COMPOUND				
1	7783-04-0	ALUMINUM	NA	NA	NA	NA
3	7783-57-6	ARSENIC	NA	NA	NA	NA
4	7783-49-3	DARIUM	NA	NA	NA	NA
6	7783-44-7	CADMIUM	NA	NA	ND	ND
7	7783-47-1	CALCIUM	NA	NA	ND	ND
10	7783-06-0	COPPER	NA	NA	ND	ND
11	7783-03-1	IRON	NA	NA	ND	ND
12	7783-01-0	LEAD	NA	NA	ND	ND
13	7783-02-1	MAGNESIUM	NA	NA	ND	ND
14	7783-07-0	MANGANESE	NA	NA	ND	ND
15	7783-08-1	MERCURY	NA	NA	ND	ND
16	7783-09-2	NICKEL	NA	NA	ND	ND
17	7783-10-3	POTASSIUM	NA	NA	ND	ND
20	7783-11-4	SODIUM	NA	NA	ND	ND
22	7783-12-5	TIN	NA	NA	ND	ND
23	7783-13-6	VANADIUM	NA	NA	ND	ND
24	7783-14-7	ZINC	NA	NA	ND	ND
		CLANIDE				

AR300990

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : RW30-1
 TRAFFIC REPORT NUMBER:
 DESCRIPTION:
 UNITS:
 DATE SAMPLED:

	RW31-1	RW32-1	RW32-1A	RWBD-1	RWBD-2	RWBD-3
MG/L				BOTTLE BLANK	BOTTLE BLANK	BOTTLE BLANK
11/03/87	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
11/03/87	11/03/87	11/03/87	11/03/87	10/28/87	11/04/87	11/03/87

*** GEOCHEMICAL PARAMETERS ***

PP	CAS NO	COMPOUND				
AMMONIA (as N)	0.1	ND	0.2	ND	ND	0.3
CHLORIDE	7	29	31	21	ND	26
NITRITE/NITRATE (as N)	1.99	1.65	ND	NA	ND	1.73
SULFATE	38	35	24	24	ND	33
TDS	141	188	123	135	NA	131
TUC	6.3B	4.2B	5.1B	5.3B	NA	1.3B
TSS	ND	ND	412	415	ND	ND
BOD	ND	ND	7J	14J	ND	ND
ALKALINITY (CaCO ₃)	71	60	32	41	NA	15B

AR300991

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : RW34-1
 TRAFFIC REPORT NUMBER:
 DESCRIPTION:
 UNITS: ug/L
 DATE SAMPLED: 11/03/87

SEE VOLATILES ***

PP CAS NO COMPOUND

4V	71-43-2	BENZENE
66V	106-88-3	TOLUENE
3MV	100-41-4	ETHYLBENZENE
7V	108-90-7	CHLOROBENZENE
11V	71-55-6	1,1,1-TRICHLOROETHANE
14V	79-00-5	1,1,2-TRICHLOROETHANE
10V	75-34-3	1,1-DICHLOROETHANE
10V	107-06-2	1,2-DICHLOROETHANE
85V	127-18-4	TETRACHLOROETHENE
87V	79-01-6	TRICHLOROETHENE
30V	156-60-5	TRANS-1,2-DICHLOROETHENE
29V	75-35-4	1,1-DICHLOROETHENE
88V	75-01-4	VINYL CHLORIDE
6V	56-23-5	CARBON TETRACHLORIDE
23V	67-66-3	CHLOROPFORM
44V	75-09-2	METHYLENE CHLORIDE
32V	78-67-5	1,2-DICHLOROPROPANE
48V	75-27-4	TRIMODI CHLOROMETHANE
		TRICHLOROFLUOROETHANE

SEE BASE/NEUTRALS ***

PP CAS NO COMPOUND

70B	84-66-2	DIETHYL PHTHALATE
67B	85-68-7	METHYL BENZYL PHTHALATE
26B	95-50-1	1,2-DICHLOROBENZENE
27B	541-73-1	1,3-DICHLOROBENZENE
	106-46-7	1,4-DICHLOROBENZENE

PP	CAS NO	COMPOUND	RW34-1	RW35-1	RWTB-2	RWTB-3	RWTB-4
4V	71-43-2	BENZENE	ND	ND	ND	ND	ND
66V	106-88-3	TOLUENE	0.008	40	0.07B	0.15B	0.05B
3MV	100-41-4	ETHYLBENZENE	ND	ND	ND	ND	ND
7V	108-90-7	CHLOROBENZENE	ND	ND	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	75	0.16B	0.06B	0.04B	0.05B
14V	79-00-5	1,1,2-TRICHLOROETHANE	0.05	ND	ND	ND	ND
10V	75-34-3	1,1-DICHLOROETHANE	0.10	ND	ND	ND	ND
10V	107-06-2	1,2-DICHLOROETHANE	0.54	ND	ND	ND	ND
85V	127-18-4	TETRACHLOROETHENE	4.3	ND	ND	ND	ND
87V	79-01-6	TRICHLOROETHENE	12	0.01B	0.03	0.02	0.02
30V	156-60-5	TRANS-1,2-DICHLOROETHENE	0.02	ND	ND	ND	ND
29V	75-35-4	1,1-DICHLOROETHENE	5.1J	ND	ND	ND	ND
88V	75-01-4	VINYL CHLORIDE	ND	ND	ND	ND	ND
6V	56-23-5	CARBON TETRACHLORIDE	ND	ND	0.24	ND	ND
23V	67-66-3	CHLOROPFORM	ND	0.06B	0.33B	0.15B	0.05
44V	75-09-2	METHYLENE CHLORIDE	0.50B	8.8B	0.23B	0.86B	0.19B
32V	78-67-5	1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND
48V	75-27-4	TRIMODI CHLOROMETHANE	0.02B	0.03B	0.02B	0.01B	0.01B

PP	CAS NO	COMPOUND	RW35-1	RW36-1	RWTB-2	RWTB-3	RWTB-4
4V	71-43-2	BENZENE	ND	ND	ND	ND	ND
66V	106-88-3	TOLUENE	0.008	0.008	0.008	0.008	0.008
3MV	100-41-4	ETHYLBENZENE	ND	ND	ND	ND	ND
7V	108-90-7	CHLOROBENZENE	ND	ND	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	75	0.16B	0.06B	0.04B	0.05B
14V	79-00-5	1,1,2-TRICHLOROETHANE	0.05	ND	ND	ND	ND
10V	75-34-3	1,1-DICHLOROETHANE	0.10	ND	ND	ND	ND
10V	107-06-2	1,2-DICHLOROETHANE	0.54	ND	ND	ND	ND
85V	127-18-4	TETRACHLOROETHENE	4.3	ND	ND	ND	ND
87V	79-01-6	TRICHLOROETHENE	12	0.01B	0.03	0.02	0.02
30V	156-60-5	TRANS-1,2-DICHLOROETHENE	0.02	ND	ND	ND	ND
29V	75-35-4	1,1-DICHLOROETHENE	5.1J	ND	ND	ND	ND
88V	75-01-4	VINYL CHLORIDE	ND	ND	ND	ND	ND
6V	56-23-5	CARBON TETRACHLORIDE	ND	ND	0.24	ND	ND
23V	67-66-3	CHLOROPFORM	ND	0.06B	0.33B	0.15B	0.05
44V	75-09-2	METHYLENE CHLORIDE	0.50B	8.8B	0.23B	0.86B	0.19B
32V	78-67-5	1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND
48V	75-27-4	TRIMODI CHLOROMETHANE	0.02B	0.03B	0.02B	0.01B	0.01B

PP	CAS NO	COMPOUND	RW36-1	RW37-1	RWTB-2	RWTB-3	RWTB-4
4V	71-43-2	BENZENE	ND	ND	ND	ND	ND
66V	106-88-3	TOLUENE	0.008	0.008	0.008	0.008	0.008
3MV	100-41-4	ETHYLBENZENE	ND	ND	ND	ND	ND
7V	108-90-7	CHLOROBENZENE	ND	ND	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	75	0.16B	0.06B	0.04B	0.05B
14V	79-00-5	1,1,2-TRICHLOROETHANE	0.05	ND	ND	ND	ND
10V	75-34-3	1,1-DICHLOROETHANE	0.10	ND	ND	ND	ND
10V	107-06-2	1,2-DICHLOROETHANE	0.54	ND	ND	ND	ND
85V	127-18-4	TETRACHLOROETHENE	4.3	ND	ND	ND	ND
87V	79-01-6	TRICHLOROETHENE	12	0.01B	0.03	0.02	0.02
30V	156-60-5	TRANS-1,2-DICHLOROETHENE	0.02	ND	ND	ND	ND
29V	75-35-4	1,1-DICHLOROETHENE	5.1J	ND	ND	ND	ND
88V	75-01-4	VINYL CHLORIDE	ND	ND	ND	ND	ND
6V	56-23-5	CARBON TETRACHLORIDE	ND	ND	0.24	ND	ND
23V	67-66-3	CHLOROPFORM	ND	0.06B	0.33B	0.15B	0.05
44V	75-09-2	METHYLENE CHLORIDE	0.50B	8.8B	0.23B	0.86B	0.19B
32V	78-67-5	1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND
48V	75-27-4	TRIMODI CHLOROMETHANE	0.02B	0.03B	0.02B	0.01B	0.01B

PP	CAS NO	COMPOUND	RW37-1	RWTB-2	RWTB-3	RWTB-4	
4V	71-43-2	BENZENE	ND	ND	ND	ND	
66V	106-88-3	TOLUENE	0.008	0.008	0.008	0.008	
3MV	100-41-4	ETHYLBENZENE	ND	ND	ND	ND	
7V	108-90-7	CHLOROBENZENE	ND	ND	ND	ND	
11V	71-55-6	1,1,1-TRICHLOROETHANE	75	0.16B	0.06B	0.04B	
14V	79-00-5	1,1,2-TRICHLOROETHANE	0.05	ND	ND	ND	
10V	75-34-3	1,1-DICHLOROETHANE	0.10	ND	ND	ND	
10V	107-06-2	1,2-DICHLOROETHANE	0.54	ND	ND	ND	
85V	127-18-4	TETRACHLOROETHENE	4.3	ND	ND	ND	
87V	79-01-6	TRICHLOROETHENE	12	0.01B	0.03	0.02	
30V	156-60-5	TRANS-1,2-DICHLOROETHENE	0.02	ND	ND	ND	
29V	75-35-4	1,1-DICHLOROETHENE	5.1J	ND	ND	ND	
88V	75-01-4	VINYL CHLORIDE	ND	ND	ND	ND	
6V	56-23-5	CARBON TETRACHLORIDE	ND	ND	0.24	ND	ND
23V	67-66-3	CHLOROPFORM	ND	0.06B	0.33B	0.15B	0.05
44V	75-09-2	METHYLENE CHLORIDE	0.50B	8.8B	0.23B	0.86B	0.19B
32V	78-67-5	1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND
48V	75-27-4	TRIMODI CHLOROMETHANE	0.02B	0.03B	0.02B	0.01B	0.01B

AR300992

CROTTON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :
 TRAFFIC REPORT NUMBER :
 DESCRIPTION :
 UNITS :
 DATE SAMPLED :

RW34-1	RWTB-1	RW35-1	RWTB-2	RW36-1	RWTB-3	RW37-1
UG/L	TRIP BLANK UG/L 10/28/87	UG/L 11/03/87	UG/L 11/03/87	UG/L 11/04/87	UG/L 11/04/87	UG/L 11/04/87

*** INORGANICS ***

PP	CAS NO	COMPOUND
----	--------	----------

1		ALUMINUM
3		ARSENIC
4		BARIUM
6		CALCIUM
7		CALCIUM
10		COPPER
11		IRON
12		LEAD
13		MAGNESIUM
14		MANGANESE
15		MERCURY
16		NICKEL
17		POTASSIUM
20		SODIUM
22		TIN
23		VANADIUM
24		ZINC
		CYANIDE

AR300993

CROTON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER:	RWTB-1	RWTB-1	RWTB-1	RWTB-2	RWTB-3	RWTB-3
TRAFFIC REPORT NUMBER:						
DESCRIPTION:	TRIP BLANK					
UNITS:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
DATE SAMPLED:	10/28/87	11/03/87	11/03/87	11/04/87	11/04/87	11/04/87

*** GEOCHEMICAL PARAMETERS ***		
ITEM	CAS NO.	COMPOUND
AMMONIA (as N)	ND	
CHLORIDE	21	NA
NITRITE/NITRATE (as N)	7.16	12
SULFATE	41	NA
TDS	153	1.66
TOC	2.68	30
TSS	ND	320
BOD	ND	1.7B
ALKALINITY (CACO ₃)	58	ND
		41
		ND
		22

AR300994

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER:
DESCRIPTION:
UNITS:
DATE SAMPLED:

RW38-1
11/04/87
UG/L

*** VOLATILES ***

PP CAS NO COMPOUND

PP	CAS NO	COMPOUND	RW38-1	RWTB-4	RWTB-4	RWTB-4
4V	71-43-2	BENZENE	ND	ND	ND	ND
86V	108-48-3	TOLUENE	0.04B	ND	0.03B	0.07B
34V	100-41-4	ETHYL BENZENE	ND	ND	ND	0.10B
7V	108-90-7	CHLOROBENZENE	ND	ND	ND	ND
11V	71-55-6	1,1,1-TRICHLOROETHANE	0.14B	ND	ND	0.60
14V	79-00-5	1,1,2-TRICHLOROETHANE	ND	ND	ND	ND
10V	75-34-3	1,1-DICHLOROETHANE	ND	ND	ND	0.01
10V	107-06-2	1,2-DICHLOROETHANE	ND	ND	ND	0.14
85V	127-18-4	TETRACHLOROETHANE	0.02	ND	ND	ND
87V	79-01-6	TRICHLOROETHENE	0.005B	ND	ND	0.006B
30V	156-60-5	TRANS-1,2-DICHLOROETHENE	ND	ND	ND	ND
29V	75-35-4	1,1-DICHLOROETHENE	ND	ND	ND	ND
88V	75-01-4	VINYL CHLORIDE	ND	ND	ND	ND
6V	56-21-5	CARBON TETRACHLORIDE	ND	ND	ND	ND
23V	67-66-3	CHLOROFORM	0.12B	ND	0.16B	0.02B
44V	75-09-2	METHYLENE CHLORIDE	0.19B	ND	0.16B	0.15B
32V	78-87-5	1,2-DICHLOROPROPANE	ND	ND	ND	ND
4BV	75-57-4	BROMODICHLOROMETHANE	ND	ND	ND	ND
		TRICHLOROFLUOROMETHANE	ND	ND	ND	ND

*** BASE/NEUTRALS ***

PP CAS NO COMPOUND

PP	CAS NO	COMPOUND	RW38-1	RWTB-4	RWTB-4
70B	84-66-2	DIETHYL PHthalate	NA	NA	NA
67B	85-68-7	2-METHYL BENZYL PHthalate	NA	NA	NA
	95-50-1	2,2-DICHLOROBENZENE	ND	ND	ND
26B	541-73-1	2,3-DICHLOROBENZENE	ND	ND	ND
27B	106-46-7	2,4-DICHLOROBENZENE	0.07	ND	ND

0995

CROYDON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER :	RM18-1		RM19-1		RM20-1	
TRAFFIC REPORT NUMBER:			TRIP BLANK	UG/L	UG/L	UG/L
DESCRIPTION:			UG/L	12/15/87	11/04/87	11/04/87
UNITS:			UG/L			
DATE SAMPLED:			UG/L			
see INORGANICS ***			NA	NA	NA	NA
PP	CAS NO	COMPOUND	NA	NA	NA	NA
1		ALUMINUM	NA	NA	NA	NA
3		ARSENIC	NA	NA	NA	NA
4		BARIUM	NA	NA	NA	NA
6		CALCIUM	NA	NA	NA	NA
7		CALCIUM	NA	NA	NA	NA
10		COPPER	NA	NA	NA	NA
11		IRON	NA	NA	NA	NA
12		LEAD	NA	NA	NA	NA
13		MAGNESIUM	NA	NA	NA	NA
14		MANGANESE	NA	NA	NA	NA
15		MERCURY	NA	NA	NA	NA
16		NICKEL	NA	NA	NA	NA
17		POTASSIUM	NA	NA	NA	NA
20		SODIUM	NA	NA	NA	NA
22		TIN	NA	NA	NA	NA
23		VANADIUM	NA	NA	NA	NA
24		ZINC	NA	NA	NA	NA
		CYANIDE	NA	NA	NA	NA

AR300996

CROWDSON TCE TABLE 3 - RESIDENTIAL WELLS

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
DESCRIPTION : UNITS : DATE SAMPLED :

AR300997

TABLE 4 CROYDON TCE SITE
SURFACE WATER ANALYSES

SAMPLE NUMBER :	TRAFFIC REPORT NUMBER:	DESCRIPTION:	UNITS:	DATE SAMPLED:	SM1-1	SM2-1	SM3-1	SM4-1	SM5-1	SM6-1	SM10-1
*** VOLATILES ***											
PP	CAS NO	COMPOUND			ND						
114	71-55-6	1,1,1-TRICHLOROETHANE			ND						
87V	79-01-6	TRICHLOROETHENE			ND						

AR300998

TABLE 4 CROWDON TCE SITE SURFACE MATTER ANALYSES

INORGANICS

AR300999

TABLE 4 CROTON TCE SITE
SURFACE WATER ANALYSES

SAMPLE NUMBER :	SW11-1	SW12-1	SW13-1A	SW14-1	SW15-1	SW16-1
TRAFFIC REPORT NUMBER:						
DESCRIPTION:						
UNITS:	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
DATE SAMPLED:	12/17/87	12/17/87	12/16/87	12/16/87	12/17/87	12/17/87
DUPLICATE						
	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L
	12/16/87					
*** VOLATILES ***						
PP	CAS NO	COMPOUND				
111V	71-55-6	1,1,1-TRICHLOROETHANE	ND	1.6	1.7	ND
67V	79-01-6	TRICHLOROETHENE	ND	6.1	5.5	2.3
				4.4	4.4	2.4
					2.3	2.1
						6.1

AR301000

TABLE 4 CROYDON TCE SITE
SURFACE WATER ANALYSES

SAMPLE NUMBER :	SW11-1 NCM764			SW12-1 NCM761			SW13-1 NCM758			SW14-1 NCM757			SW15-1 NCM762			SW16-1 NCM763		
TRAFFIC REPORT NUMBER:	12/17/87			12/17/87			12/16/87			12/16/87			12/17/87			12/17/87		
DESCRIPTION:																		
UNITS:																		
DATE SAMPLED:																		
*** INORGANICS ***																		
PP	CAS NO	COMPOUND																
1		ALUMINUM	206L	1186L	1186L	208L	1186L	1186L	1186L	1186L	1186L	1186L	1186L	1186L	1186L	1186L	1186L	
4		BARIUM	1891	1641	1641	1890	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	1681	
7		CALCIUM	42900	15800	15800	14100	14200	14200	14200	14200	14200	14200	14200	14200	14200	14200	14200	
11		IRON	3020	756	756	ND	725	725	725	725	725	725	725	725	725	725	725	
12		LEAD	ND	ND	ND													
13		MAGNESIUM	18900	9520	9520	9850	9780	9780	9780	9780	9780	9780	9780	9780	9780	9780	9780	
14		MANGANESE	268J	555J	459J	465J	610J	610J	610J	610J	610J	610J	610J	610J	610J	610J	610J	
16		NICKEL	1131	110J	1131	ND	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	
17		POTASSIUM	39300	6810	6810	54800	23100	23100	24100	6090	6120	25100	25100	6570	6570	5050	5050	
20		SODIUM	N	N	N	ND	N	N	N	N	N	N	N	28700	28700	17200	17200	
21		THALLIUM	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N	N	N	N	
23		VANADIUM	26	64	53	33	19	19	19	56	64	61	61	61	61	61	61	
24		ZINC	ND	ND	ND													
		CYTANIDE																

AR301001

TABLE 4 CROYDON TCE SITE
SURFACE WATER ANALYSES

SAMPLE NUMBER :	SWTB-1			SWFB-1			SWTB-1		
TRAFFIC REPORT NUMBER:				BOTTLE BLANK	FIELD BLANK	TRIP BLANK			
DESCRIPTION:				UG/L	UG/L	UG/L			
UNITS:				12/17/87	12/17/87	12/17/87			
DATE SAMPLED:									
*** VOLATILEs ***									
PP	CAS NO	COMPOUND							
11V	71-55-6	1,1,1-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND
R77	79-01-6	TRICHLOROETHENE	ND	ND	ND	ND	ND	ND	ND

AR301002

TABLE 4 CROYDON TCE SITE
SURFACE WATER ANALYSES

SAMPLE NUMBER :	SWBB-1		SWTB-1	
TRAFFIC REPORT NUMBER:		MCM765	BOTTLE BLANK	FIELD BLANK
DESCRIPTION:				TRIP BLANK
UNITS:		UG/L		
DATE SAMPLED:	12/17/87	12/17/87	12/17/87	12/17/87
*** INORGANICS ***				
PP	CAS NO	COMPOUND		
1		ALUMINUM	ND	ND
4		BARIUM	ND	ND
7		CALCIUM	ND	ND
11		IRON	ND	ND
12		LEAD	ND	ND
13		MAGNESIUM	ND	ND
14		MANGANESE	ND	ND
16		NICKEL	ND	ND
17		POTASSIUM	ND	ND
20		SODIUM	ND	ND
21		THALLIUM	ND	ND
23		VANADIUM	ND	ND
24		ZINC	ND	ND
		CYANIDE	ND	ND

AR301003

TABLE 5 CROYDON TCE SITE
SEDIMENT ANALYSES

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
TEST LOCATION : UNITS : DATE SAMPLED :

VOLATILES

PP	CAS NO	COMPOUND
----	--------	----------

AR301004

TABLE 5 CROWDON TCE SITE
SEDIMENT ANALYSES

SAMPLE NUMBER :	SD1-1	SD2-1	SD3-1	SD4-1	SD5-1	SD9-1
TRAFFIC HISTORY NUMBER:	WCM294	WCM295	WCM296	WCM297	WCM298	WCM299
DESCRIPTION:						
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
DATE SAMPLED:	12/17/87	12/17/87	12/17/87	12/17/87	12/16/87	12/16/87
*** INORGANICS ***						
PP	CAS NO	COMPOUND				
1		ALUMINUM				
2		ANTIMONY				
3		ARSENIC				
4		BARIUM	(2.5)	9.2	17	12.6
5		CALCIUM	(22)	78	143	123
6		CALCIUM	ND	2.6	2.4	1.4
7		CHLORIDE	(1900)	1418	2120	1400
8		CHROMIUM	19	6.6	21	15
9		COBALT	(7.7)	ND	14.4	15.8
10		COPPER	35	7.2	86	21
11		LEAD	1600	6710	9450	9880
12		MAGNESIUM	31K	13J	21600L	6440L
13		MANGANESE	2220	(980)	45K	22K
14		MERCURY	372L	98L	(1250)	(11310)
15		NICKEL	0.31	ND	280	11220
16		POTASSIUM	(9.4)	ND	68L	191L
17		SELENIUM	(391)	1418	123L	133L
18		SILVER	ND	ND	ND	ND
19		SODIUM	ND	ND	ND	ND
20		VANADIUM	ND	ND	ND	ND
21		ZINC	ND	ND	ND	ND
22		CYTANIDE	ND	ND	ND	ND
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						
101						
102						
103						
104						
105						
106						
107						
108						
109						
110						
111						
112						
113						
114						
115						
116						
117						
118						
119						
120						
121						
122						
123						
124						
125						
126						
127						
128						
129						
130						
131						
132						
133						
134						
135						
136						
137						
138						
139						
140						
141						
142						
143						
144						
145						
146						
147						
148						
149						
150						
151						
152						
153						
154						
155						
156						
157						
158						
159						
160						
161						
162						
163						
164						
165						
166						
167						
168						
169						
170						
171						
172						
173						
174						
175						
176						
177						
178						
179						
180						
181						
182						
183						
184						
185						
186						
187						
188						
189						
190						
191						
192						
193						
194						
195						
196						
197						
198						
199						
200						
201						
202						
203						
204						
205						
206						
207						
208						
209						
210						
211						
212						
213						
214						
215						
216						
217						
218						
219						
220						
221						
222						
223						
224						
225						
226						
227						
228						
229						
230						
231						
232						
233						
234						
235						
236						
237						
238						
239						
240						
241						
242						
243						
244						
245						
246						
247						
248						
249						
250						
251						
252						
253						
254						
255						
256						
257						
258						
259						
260						
261						
262						
263						
264						
265						
266						
267						
268						
269						
270						
271						
272						
273						
274						
275						
276						
277						
278						
279						
280						
281						
282						
28						

TABLE 5 CROYDON TCE SITE SEDIMENT ANALYSES

SAMPLE NUMBER :			TRAFFIC REPORT NUMBER:		
DESCRIPTION:			UNITS:		
DATE SAMPLED:			UG/KG		
12/17/87			12/17/87		
ITEM	CAS NO	COMPOUND	ITEM	CAS NO	COMPOUND
67-64-1		ACETONE	270B		90A
106-88-3		TOLUENE	ND	2J	ND
155-60-5		TRANS-1,2-DICHLOROETHENE	ND	10J	ND
75-09-2		METHYLENE CHLORIDE	16	ND	ND
*** VOLATILES ***					
668B	117-81-7	DIISOBUTYLPHthalate	ND	ND	ND
778B	208-96-8	ACENAPHTHYLENE	ND	ND	ND
788B	120-12-7	ANTHRACENE	ND	ND	ND
722B	56-55-3	BIENZO(A)ANTHRACENE	ND	ND	340J
740B	205-99-2	BIENZO(B)FLUORANTHENE	ND	ND	ND
798B	191-24-2	BENZO(A,1)PYRENE	ND	ND	1100
738B	50-32-8	BENZO(A)PYRENE	ND	ND	ND
768B	216-01-9	CHRYSTENE	ND	ND	1400
398B	206-44-0	FLUORANTHENE	ND	ND	ND
638B	193-39-5	INDENO(1,2,3-C)PYRENE	ND	ND	1200
818B	55-01-8	PHENANTHRENE	ND	ND	990
129-00-0		PYRENE	ND	ND	1400
*** BASE/NEUTRALS ***					
PPP	CAS NO	COMPOUND	PPP	CAS NO	COMPOUND
668B	117-81-7	DIISOBUTYLPHthalate	ND	ND	ND
778B	208-96-8	ACENAPHTHYLENE	ND	ND	ND
788B	120-12-7	ANTHRACENE	ND	ND	ND
722B	56-55-3	BIENZO(A)ANTHRACENE	ND	ND	340J
740B	205-99-2	BIENZO(B)FLUORANTHENE	ND	ND	ND
798B	191-24-2	BENZO(A,1)PYRENE	ND	ND	2000
738B	50-32-8	BENZO(A)PYRENE	ND	ND	ND
768B	216-01-9	CHRYSTENE	ND	ND	ND
398B	206-44-0	FLUORANTHENE	ND	ND	ND
638B	193-39-5	INDENO(1,2,3-C)PYRENE	ND	ND	ND
818B	55-01-8	PHENANTHRENE	ND	ND	ND
129-00-0		PYRENE	ND	ND	ND

AR301006

TABLE 5 CROYDON TCE SITE SEDIMENT ANALYSES

SAMPLE NUMBER :
TRAFFIC REPORT NUMBER :
DESCRIPTION :
UNITS :

SAMPLE NUMBER :	SD11-1	SD12-1	SD13-1	SD13-1A	SD15-1
TRAFFIC REPORT NUMBER:	MCM307	MCM304	MCM301	MCM302	MCM305
DESCRIPTION:	DUPLICATE				
UNITS:	MG/KG	MG/KG	MG/KG	MG/KG	MG/KG
DATE SAMPLED:	12/17/87	12/17/87	12/17/87	12/17/87	12/17/87
*** INORGANICS ***					
PP	CAS NO	COMPOUND			
1		ALUMINUM	5630L	6410L	6240L
2		ANTIMONY	N	N	N
3		ARSENIC	2B	4.6	11
4		BARIUM	1139	89	206
5		CALCIUM	6.9	2.1	5.7
6		CALCIUM	40880	8721	2840
7		CHROMIUM	37	19	20
8		COBALT	ND	9.0	20
9		COPPER	55	21	39
10		IRON	59000L	15200L	17000L
11		LEAD	182K	36K	90K
12		MAGNESIUM	1440	1440	1750
13		MANGANESE	177L	234L	1850
14		MERCURY	ND	ND	867L
15		NICKEL	26	9.4	19.9
16		POTASSIUM	577	2400	417
17		SELENIUM	N	N	N
18		SILVER	N	N	N
19		SODIUM	N	N	N
20		VANADIUM	N	N	N
21		ZINC	14901	1376	11490
22		ZINC	26	21	176
23		ZINC	212K	127K	127K
24		ZINC	ND	ND	ND
		CYANIDE	ND	ND	ND
			5630L	3960L	5990L
			N	N	N
			12	12	10
			1139	49	166
			6	1.6	6
			1550	1550	1550
			31	31	31
			14.1	14.1	14.2
			89	89	89
			10400L	9360L	45400L
			14100L	14100L	14100L
			71K	71K	71K
			8.4J	119K	467K
			11850	1580	1420
			867L	91L	1310L
			ND	ND	ND
			112	112	127
			1618	N	N
			N	N	N
			389	1730	1201
			13	13	126
			560K	91K	292K
			ND	ND	ND
			5.2	ND	ND

INORGANICS

UNIVERSITY OF TORONTO LIBRARIES

ALUMINUM	1
ANTIMONY	2
ARSENIC	3
BARIUM	4
CALCIUM	5
CHROMIUM	6
COBALT	7
COPPER	8
IRON	9
LEAD	10
MANGANESE	11
MERCURY	12
NICKEL	13
POTASSIUM	14
SELENIUM	15
SILVER	16
SODIUM	17
VANADIUM	18
ZINC	19
CYANIDE	20
	21
	22
	23
	24

AR301007

TABLE 5 CROTON TCE SITE
SEDIMENT ANALYSES

SAMPLE NUMBER : SFPR-1
TRAFFIC REPORT NUMBER:
DESCRIPTION: CR309
UNITS: RINSEATE BULK
UG/L
DATE SAMPLED: 12/17/87

*** VOLATILES ***

PP	CAS NO	COMPOUND
67-64-1		ACETONE
86V	108-88-3	TOLUENE
30V	156-60-5	TRANS-1,2-DICHLOROETHENE
44V	75-09-2	METHYLENE CHLORIDE

*** BASE/NEUTRALS ***

PP	CAS NO	COMPOUND
66B	117-81-7	BIS(2-ETHYLHEXYL)PHthalate
77B	208-96-8	ACENAPHTHYLENE
78B	120-12-7	ANTHRACENE
72B	56-55-3	BENZO(A)ANTHRACENE
74B	205-99-2	BENZO(B)FLUORANTHENE
79B	191-24-2	BENZO(G,H,I)PERYLENE
73B	50-32-8	BENZO(A)PYRENE
76B	210-01-9	CHRYSENENE
39B	206-41-0	FLUORANTHENE
83B	193-39-5	INDENO(1,2,3-C)PYRENE
81B	65-01-8	PHENANTHRENE
84B	129-00-0	PYRENE

AR301008

TABLE 5 CROYDON TCE SITE
SEDIMENT ANALYSES

SAMPLE NUMBER : SDFB-1
TRAFFIC REPORT NUMBER : MCN309
DESCRIPTION : RINSATE BLK
UNITS : ug/l
DATE SAMPLED : 12/17/87

*** INORGANICS ***

PP CAS NO COMPOUND

1		ALUMINUM	ND
2		ANTHONY	ND
3		ARSENIC	ND
4		BARIUM	ND
5		CADMIUM	ND
6		CALCIUM	ND
7		CHROMIUM	ND
8		COBALT	ND
9		COPPER	ND
10		IRON	N
11		LEAD	35
12		MAGNESIUM	ND
13		MANGANESE	ND
14		MERCURY	ND
15		NICKEL	ND
16		POTASSIUM	ND
17		SELENIUM	N
18		SILVER	ND
19		SODIUM	ND
20		VANADIUM	ND
21		ZINC	ND
22		CYTANIDE	ND

AR301009

TABLE 6 CROTON TTF SITE
SURFACE SOILS ANALYSES

SAMPLE NUMBER :			SOIL-1			SOIL-2			SOIL-3			SOIL-4			SOIL-5				
TRAFFIC REPORT NUMBER:	CW2H4	TESTER/INSTRUMENT:	CW2H5	UNITS:	UG/KG	DATE SAMPLED:	12/15/87	TESTER/INSTRUMENT:	CW2H7	UNITS:	UG/KG	DATE SAMPLED:	12/15/87	TESTER/INSTRUMENT:	CW2H8	UNITS:	UG/KG	DATE SAMPLED:	12/15/87
*** VOLATILES ***																			
Hp	CAS NO	COMPOUND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
447	67-64-1	ACETONE	69B	46B	10m	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	75-09-2	METHYLENE CHLORIDE	1H	5H/0B	10m/5B	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
*** PESTICIDES ***																			
Hp	CAS NO	COMPOUND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
77B	208-06-8	ACENAPHTHENONE	3300	1000	1000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
72B	66-56-3	BENZO(A)ANTHRACENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
74B	205-93-2	BENZO(B)FLUORANTHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
73B	207-04-9	BENZO(A)FLUORANTHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
76B	50-38-8	BENZO(A)FLUORANTHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
76B	216-01-9	CHRYSENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
82B	53-70-1	DIBENZO(A,H)ANTHRACENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
39B	205-44-1	FLUORANTHENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
81B	193-39-5	INDENOL, 1,2,3-TRIINDENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
K1B	K5-01-3	PHENANTHRENENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
M4B	129-01-0	PHENANTHRENENE	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		

AR301010

TABLE A CROWNTREE SITE SURFACE SOILS ANALYSES

SAMPLE NUMBER:	CROWNTREE REPORT NUMBER:	SOIL-1 CROWNTREE	SOIL-1 CROWNTREE	SOIL-1 CROWNTREE	SOIL-1A CROWNTREE
DESCRIPTION:					
UNITS:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
DATE SAMPLED:	12/15/87	12/15/87	12/15/87	12/15/87	12/15/87
664 PESTICIDES ***					
IP	CAS NO	COMPOUND			
933P	72-54-0	4,4'-DDD	ND	ND	ND
	72-55-0	4,4'-DDE	ND	ND	ND
	12674-11	AKW10R-1016	ND	ND	ND
1061P	53469-21-9	AKW10R-1242	ND	ND	ND

AR301011

TABLE 6 CROYDON TCE SITE SURFACE SOILS ANALYSES

SAMPLE NUMBER : TRAFFIC REPORT NUMBER :
PICKUP LOCATION : UNITS :
IMMEDIATE SAMPLED:

AR301012

TABLE 6 CROYDON TCE SITE
SURFACE SOILS ANALYSES

SAMPLE NUMBER :	SO7-1		SO8-1		SO9-1	
TRAFFIC REPORT NUMBER:	CW291	CW292	CW293	RINSATE BLK	CW294	TRIP BLANK
DESCRIPTION:				UG/L		UG/L
UNITS:	UG/KG	UG/KG	UG/L			
DATE SAMPLED:	12/16/87	12/16/87	12/16/87			12/16/87
*** VOLATILES ***						
PP	CAS NO	COMPOUND				
44V	67-64-1	ACETONE	ND	ND	14B	12B
	75-09-2	METHYLENE CHLORIDE	ND	ND	ND	ND
*** BASE/NEUTRALS ***						
PP	CAS NO	COMPOUND				
77B	209-96-8	ACENAPHTHYLENE	ND	ND	ND	ND
72B	56-55-3	BENZO[1,2,3]ANTHRACENE	ND	ND	ND	ND
74B	205-99-2	BENZO[1,2,3]FLUORANTHENE	ND	ND	ND	ND
		BENZO[1,2,3]FLUORANTHENE	ND	ND	ND	ND
207-08-9			ND	ND	ND	ND
73B	50-32-8	BENZO[1,2,3]PYRENE	ND	ND	ND	ND
76B	218-01-9	CHRYSENE	260J	ND	ND	ND
82B	53-70-3	DIBENZO[1,2,3]ANTHRACENE	ND	ND	ND	ND
39B	206-44-0	FLUORANTHENE	410J	ND	ND	ND
H3B	193-39-5	INDENO[1,2,3-CD]PYRENE	ND	ND	ND	ND
H1B	65-01-8	PHENANTHRENE	ND	ND	ND	ND
H4B	129-00-0	PYRENE	ND	ND	ND	ND

AR301013

TABLE 6 CROYDON TCE SITE
SURFACE SOILS ANALYSES

SAMPLE NUMBER :	S07-1	SAMPLE NUMBER :	S07B-1
TRAFFIC COUNT NUMBER:	CN291	TRAFFIC COUNT NUMBER:	CN293
DESCRIPTION:	CR294	RINSATE P.L.X.	TRIP BLANK
UNITS:	UG/KG	UNITS:	UG/L
DATE SAMPLED:	12/16/87	DATE SAMPLED:	12/16/87
*** PESTICIDES ***		*** PESTICIDES ***	
PP	CAS NO	COMPOUND	
93P	72-54-8	4,4'-DDT	ND
	72-55-9	4,4'-DDE	ND
	12674-11	AROCOLOR-1016	240
1016P	53469-21-9	AROCOLOR-1242	ND

AR301014

TABLE 6 CROWDON TCE SITE
SUBSURFACE SOILS ANALYSES

SAMPLE NUMBER :	TRAFFIC REPORT NUMBER:	SOY-1	SOTB-1	SOTB-1
DESCRIPTION:		MCM291	MCM293	RINSATE BLK
UNITS:	MG/AC	MG/KG	UG/L	TRIP BLANK
DATE SAMPLED:	12/16/87	12/16/87	12/16/87	12/16/87
see INORGANICS ***				
PP	CAS NO	COMPOUND		
1		ALUMINUM	1020UL	ND
2		ANTIMONY	N	ND
3		ARSENIC	14	ND
4		BARIUM	96	ND
5		CAIUM	1.8	ND
6		CALCIUM	4X40	ND
7		CHROMIUM	11	ND
8		CHHALT	15.81	ND
9		COPPER	16	ND
10		IRON	1430UL	N
11		LEAD	32K	ND
12		MAGNESIUM	3450	ND
13		MANGANESE	H15L	ND
14		MERCURY	109L	ND
15		NICKEL	110L	ND
16		POTASSIUM	N	ND
17		SELENIUM	N	ND
18		SILVER	N	ND
19		SODIUM	12641	ND
20		VANADIUM	19	ND
21		ZINC	15	ND
22		CYANIDE	72K	ND
23			ND	ND
24				ND

AR 301015

AR301016

K

APPENDIX K
MODELS USED TO CALCULATE EXPOSURES

AR301017

APPENDIX K**MODELS USED TO CALCULATE EXPOSURES**

AR301018

K.1 SHOWER MODEL

Volatile organic chemicals (VOCs), dissolved in household water supplies can be released into the indoor air as a result of activities such as showering, bathing and dishwashing. Of particular concern to human health is the potential for elevated exposures to occur in the confined space of a shower. The shower model developed by Foster and Chrestowski (1987), was used to assess the possible inhalation exposures to VOCs from ground water at the Sand Creek sites. In the shower model inhalation exposures are modeled by estimating the rate of chemical release into the air (generation rate), the buildup (shower on) and decay (shower off) of VOCs in shower room air, and the quantity of airborne VOCs inhaled while the shower is both on and off.

Estimation of the rate of VOC release into the air is based upon Liss and Slater's adaptation of the two-layer film model of gas-liquid mass transfer. The two-film boundary theory provides the basis for estimating the overall mass transfer coefficient (K_L) for each VOC of interest according to the following equation:

$$K_L = \left(\frac{1}{k_1} + \frac{RT}{Hk_g} \right)^{-1} \quad (1)$$

where

K_L = overall mass transfer coefficient (cm/hr).

H = Henry's Law Constant (atm-m³/mol-K)

RT = 2.4×10^{-2} atm-m³/mole (gas constant of 8.2×10^{-5} atm-m³/mol-K times absolute temperature of 293 K),

k_g = gas-film mass transfer coefficient (cm/hr), and

k_1 = liquid-film mass transfer coefficient (cm/hr).

Equation 1 describes the mass transfer rate of a compound at an air-water interface where diffusion may be limited by both liquid- and gas-phase resistances.

The chemical-specific resistances to mass transport for both the liquid and gas phases were calculated from empirical expressions suggested by Liss and

Slater (1974). Typical values of k_L (20 cm/hr) and k_g (3,000 cm/hr), which have been measured for CO₂ and H₂O, respectively, were used to estimate VOC-specific values for these parameters:

$$k_L = 20(\text{cm/hr})[44/\text{MW}]^{1/2} \quad (2)$$

$$k_g = 3000(\text{cm/hr})[18/\text{MW}]^{1/2} \quad (3)$$

where:

k_L = liquid-phase mass transfer coefficient, (cm/hr)

k_g = gas-phase mass transfer coefficient, (cm/hr)

MW = molecular weight of the chemical.

The mass transfer coefficient, K_L , is adjusted to the shower water temperature, T_s , according to a semi-empirical equation developed to estimate the effect of temperature on oxygen mass-transfer rate:

$$K_{aL} = K_L(T_{1,as}/T_{1,cal})^{-0.5} \quad (4)$$

where:

K_{aL} = adjusted overall mass transfer coefficient (cm/hr),

T_1 = calibration water temperature of K_L (K),

T_s = shower water temperature (K),

η_1 = water viscosity at T_1 (cp), and

η_s = water viscosity at T_s (cp).

The concentration leaving the shower droplet, C_{vd} , is obtained from an integrated rate equation based on a mass-balance approach:

$$C_{vd} = C_{w0}(1 - \exp[-K_{aL}t_s/60d]) \quad (5)$$

where

C_{vd} = concentration leaving shower droplet after time t_s (ug/l).

C_{w0} = shower water concentration (ug/l).

- d = shower droplet diameter (mm), and
 t_s = shower droplet drop time (sec).

The term $K_{al}/60d$ combines both the rate transfer and the available interfacial area across which volatilization can occur. The value $1/60d$ equals the specific interfacial area, $6/d$, for a spherical shower droplet of diameter d multiplied by conversion factors (hr/3,600 sec and 10 mm/cm).

The VOC generation rate in the shower room, S , can then be calculated by the equation:

$$S = C_{vd}(Fr)/SV \quad (6)$$

where

- s' = indoor VOC generation rate ($\mu\text{g}/\text{m}^3\cdot\text{min}$),
 Fr = shower water flow rate (l/min), and
 SV = shower room air volume (m^3).

A simple one-box indoor air pollution model was used to estimate VOC air concentrations in the shower room. This model can be expressed as a differential equation describing the rate of change of the indoor pollutant concentration with time:

$$\frac{dC_a}{dt} = RC_a + S \quad (7)$$

where

- C_a = indoor VOC air concentration ($\mu\text{g}/\text{m}^3$), and
 R = air exchange rate (min^{-1}).

When equation 7 is integrated, the time-dependent indoor concentration can be estimated as follows:

$$C_a(t) = (S/R)(1 - \exp(-Rt)) \text{ for } t \leq D_s \quad (8)$$

and

K-3

AR301021

$$C_a(t) = (S/R(\exp[RD_s] - 1)\exp(-Rt)) \text{ for } t > D_s \quad (9)$$

where

$C_a(t)$ = indoor air VOC concentration at time t (mg/m^3),

D_s = shower duration (min), and

t = time (min).

The inhalation exposure per shower can then be calculated according to the equation:

$$E_{inh} = (Vr/(BW)(10^6)) \int_0^{D_t} C_a(t) dt \quad (10)$$

where

E_{inh} = inhalation exposure per shower ($\text{mg}/\text{kg}/\text{shower}$),

Vr = ventilation rate (l/min),

BW = body weight (kg), and

D_t = total duration in shower room (min).

This equation can be solved as:

$$E_{inh} = (Vr)(S)/[(BW)(R)(10^6)] [D_s - 1/R + \exp(-RD_s)/R] \quad (11)$$

for the duration of the shower, and as:

$$E_{inh} = (Vr)(S)/[(BW)(R)(10^6)] \times \\ [D_s + \exp(-RD_s)/R - \exp[R(D_s + D_c)]/R] \quad (12)$$

for both the duration of the shower and the duration in the room after the shower is turned off.

Table K-1 lists the input parameters to the shower model.

TABLE K-1
INPUT PARAMETERS TO THE SHOWER MODEL

Parameter	Value
Inhalation Factor	0.46
Shower Water Temperature	318 K
Water Viscosity at Shower Temperature	0.596 cp
Shower Droplet Drop Time	2 sec
Shower Droplet Diameter	1 mm
Shower Water Flow Rate	10 liter/min
Air Flow Rate	0 m ³ /min
Air Exchange Rate in Shower Room	0.5 hr ⁻¹
Ventilization Rate	15 liter/min
Shower Duration	15 min
Duration in Shower Room After Shower Stops	5 min
Body Weight	70 kg

K-5

AR301023

K 2 Model to Calculate Dermal Absorption from Bathing

Estimates of chronic daily intakes resulting from exposure via dermal absorption of volatile organic chemicals of potential concern in the groundwater are based on the work of Wester et al. (1987). Wester et al. measured the amounts of benzene transferred into human skin (5.7 cm^2) from a dilute (21.7 ug/ml) solution in water (1.5 ml) over a 30 minute period.

The amount of benzene which could be transferred into the skin during a bath was conservatively assumed to be the sum of the amounts of benzene absorbed through the various layers of the skin (epidermis, dermis, and stratum corneum). This sum, which was adjusted for the total skin surface area expected to be exposed during a bath [assumed to be approximately 80% of the 19,400 cm^2 adult body surface area (EPA 1985d)] amounted to 0.15% of the dose to which the skin was exposed. Therefore, the amount of benzene (in ug) that would be absorbed during a 30 minute bath can be estimated from the Wester et al. study as follows:

$$\frac{\text{Benzene Absorbed (ug)}}{\text{Event}} = \frac{21.7 \text{ ug}}{\text{ml}} \times \frac{1.5 \text{ ml}}{5.7 \text{ cm}^2} \times 0.0015 \times 19,320 \text{ cm}^2$$

where:

21.7 ug/ml = Concentration of benzene in the Wester et al. study.

1.5 ml = Volume of solution covering the skin in the Wester et al. study.

5.7 cm^2 = Amount of skin covered by the 1.5 ml of solution in the Wester et al. study.

0.0015 = Proportion of benzene absorbed in the Wester et al. study.

19,320 cm^2 = Surface area of skin exposed to water while bathing.

Because dermal absorption of organic chemicals from a dilute solution is, to a first order approximation, proportional to the lipophilicity of the chemicals (Foster and Chrostowski, 1986), doses for each organic chemical were derived relative to the amount of benzene absorbed in the Wester et al. study based on (1) the ratio of the aqueous concentration of each chemical of concern in the bath water to the aqueous concentration of benzene used in the Wester et al. study, and (2) the ratio of the octanol-water partition

coefficient (K_{ow}) of benzene ($K_{ow} = 132$) to that of each organic chemical of concern in the groundwater. Based on these ratios, the mass of each chemical of concern transferred into the skin during a 30 minute bath were estimated as follows:

$$\frac{[Cabs]_i}{\text{Bath}} = \frac{\text{Benzene Absorbed (ug)}}{\text{Bath}} \times \frac{K_{ow} i^{\text{th}} \text{ chemical}}{K_{ow} \text{ benzene}} \times \frac{C_1 \text{ of } i^{\text{th}} \text{ chemical (ug/l)}}{C_1 \text{ of benzene (ug/l)}}$$

where:

$Cabs_i$ = Concentration of i^{th} chemical absorbed to skin during bath, (ug/bath)

C_1 of i^{th} chemical = Concentration of i^{th} chemical in groundwater, (ug/l)

C_1 benzene = Concentration of benzene in Wester et al. study, (21,700 ug/l).

Chronic daily intakes, (CDIs), were then calculated from the following equation, assuming that an average 70 kg adult takes one bath per day for a 70 year lifetime.

$$\text{CDI (mg/kg/day)} = Cabs \times \frac{1 \text{ bath}}{\text{day}} \times \frac{1}{70 \text{ kg}} \times 10^{-3} \frac{\text{kg}}{\text{ug}}$$